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REPORT
OF
METROPOLITAN PARK COMMISSION

1902



REPORT

OF THE

BOARD OF METROPOLITAN PARK COMMISSIONERS.


JANUARY, 1902.



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Commonwealth of Massachusetts.

REPORT.

The Metropolitan Park Commission presents herewith its ninth annual report.

The Commission is charged with the work of caring for and maintaining a system of greater parks, or reservations as they are more frequently called, and parkways or boulevards, for the Metropolitan Parks District. This district comprises Boston and thirty-eight neighboring cities and towns, all within a radius of thirteen miles from the State House. The general features of the plan for this park system were described in a report made by a preliminary commission to the Legislature of 1893, and have been adhered to with great fidelity.

In brief, the plan then outlined was to preserve as much as possible of the most characteristic scenery of the Metropolitan District by acquiring such portions as were likely to be useful as recreation grounds, and to connect these areas or open spaces with each other and with the more important parks and parkways which the separate municipalities were providing at their own expense. While the fundamental idea of the plan was that of preserving these desirable open spaces without regard to their locality, yet the unique and widely varied topography of Boston and its suburbs not only permitted but almost dictated their equitable distribution throughout the entire district; and so it has resulted that the people of every portion of the district have felt an extraordinary interest in the gradual acquirement and development of the Metropolitan Park System, and have been drawn together in a remarkable unity of feeling in regard to it. Local pride

has been well satisfied either by the actual acquirements and developments as they have been made, or by the expectation of a gradual completion of the system; and a very gratifying freedom from effort to secure merely local advantages by acquirements or construction not contemplated by the original plan has resulted.

Appropriations for this Metropolitan work have been made from year to year in general form, each appropriation being added to the original loan, and all forming at this time three separate loans, which now aggregate about \$10,000,000. These loans are the Metropolitan Parks Loan, beginning with that under the Park Act, chapter 407 of the Acts of 1893, which created the Commission and defined its powers; the Metropolitan Parks Loan, Series II., beginning with the first appropriation for boulevards and parkways, chapter 288 of the Acts of 1894; and the Nantasket Beach Loan, beginning with the appropriation under chapter 464 of the Acts of 1899, which specifically authorized the acquirement of Nantasket Beach.

Under the Park Acts have been acquired the woods reservations, Blue Hills, Middlesex Fells, Stony Brook and Beaver Brook; the banks of Charles, Mystic and Neponset rivers; and seashore at Revere Beach, King's Beach, Lynn, Winthrop and Quincy. These provide for practically all the parks originally recommended, and of the portions not yet acquired only a few miles are of immediate importance to the system. Of the land necessary to provide for all the parkways required to connect these reservations and unite the principal park areas of the district, two-thirds of the entire projected system have been acquired, and construction of about one-half has been fully completed. Nantasket Beach, although one of the great reservations of the district, is peculiarly isolated. It was acquired under a special act which required Cohasset, although out of the Parks District, to share the expense of its acquirement and maintenance. This apparently anomalous arrangement was assented to by Cohasset in the expectation that the reservation would finally extend into that town so as to include the interesting cliffs at the southerly end of Nantasket Beach and Straits Pond at the beginning of the beautiful Jerusalem Road; but the

Commission has not yet been able to extend its taking to include these attractive features. Full statistics as to the appropriations and acquirements will be found in the accompanying reports and plan submitted herewith, but they may be briefly summarized as follows:—

	Park.	Boulevard.	Nantasket.
Appropriations prior to 1901,	\$6,205,000 00	\$3,025,000 00	\$600,000 00
Miscellaneous receipts prior to 1901,	161,073 69	21,736 77	4,975 00
Appropriations, 1901,	630,000 00	-	100,000 00
Miscellaneous receipts, 1901,	37,260 32	8,170 64	906 50
Totals,	\$7,053,334 01	\$3,054,907 41	\$705,881 50

The appropriations made in 1901 were understood to be for the settlement of the balance of claims then outstanding, and not to provide for any new acquirements. For that reason, no important new acquirements have been made during the past year. The areas of the reservations and parkways may be summarized as follows:—

Under Park Acts.

Woods reservations:—	Acres.	Total.
Blue Hills,	4,857.96	
Middlesex Fells (in addition to 1,145.03 held by water boards),	1,882.95	
Stony Brook,	463.72	
Beaver Brook,	58.35	
Hart's Hill,	23.09	
Hemlock Gorge,	23.11	
	7,309.18	
River banks:—	Miles.	Acres.
Charles,	16.500	562.84
Mystic,	5.000	289.44
Neponset,	9.000	928.83
	30.000	1,781.11
Seashore:—	Miles.	Acres.
Revere,	2.710	67.34
Winthrop,	1.320	16.74
King's Beach, . . . . .	.690	10.81
Quincy Shore,	2.000	37.97
Nantasket,	1.017	24.51
	7.737	157.37
		9,247.66

Under Boulevard Acts.

Parkways:—	Miles	Total.
Blue Hills,	2.280	
Middlesex Fells,	4.605	
Revere Beach,	5.240	
Mystic Valley,	2.900	
West Roxbury,	1.510	
Neponset River,	1.120	
Fresh Pond, . . . . .	.520	
Furnace Brook,	2.540	
Nahant Beach,	2.230	
Lynnway, Revere Beach to Saugus River, . . . . .	.690	
	—	23.635

These areas do not include the river surfaces, nor in Middlesex Fells the holdings of the Metropolitan Water Board and those of the city of Medford in the neighborhood of Spot Pond, aggregating 1,145.03 acres, nor do they include the park or other public open spaces owned by the separate municipalities of the Parks District.

The claims arising out of the acquirement of the large areas now placed under the care of this Commission have been very numerous, representing those of over 3,000 different claimants. Of this large number of claims, 325 claims remained unadjusted Dec. 1, 1901, of which 218 were for takings under the Park Acts, and 107 were for takings under the Boulevard Act. The unsettled claims at Nantasket Beach are few, and aggregate only a small amount. Of these claims, 142 were in suit. The balance on hand for the settlement of claims against the Park Loans and the Nantasket Beach Loan now appears sufficient. The balance on hand for settlement of claims against Metropolitan Parks Loan, Series II., is clearly insufficient to settle either the outstanding land claims or to provide for certain acquirements and construction which the Legislature intended to provide for in the general appropriations of previous years. The deficiency under this loan represents the final summing up of the claims for takings under the Boulevard Act since the beginning of the work, and is occasioned chiefly by the fact that the appropriations have been based by the Legislature upon preliminary estimates of the value of lands proposed to be taken, and have not included any allowance for the interest and expenses

BEAVER BROOK RESERVATION. — PICNICKERS.



likely to result from long delays before settlement, and especially before contested claims can be brought to trial, nor for the incidental expense of engineering. Interest runs on all these claims at six per cent. In each claim the claimant is allowed two years within which to decide whether to contest the award of the Commission, and delays in the trial of suits prolong the interest period thereafter from six months to three years, to the expense of which must be added, in making up the final cost of the settlement of each claim, the expense of trial of suits, and any possible variation of the opinion of the jury as to the value of the claim. In addition to these expenses, over which the Commission has no control, there has been especial difficulty in accurately forecasting the claims under the Boulevard Act, because the takings for boulevards and parkways necessarily consist of long strips of land following the line of the parkway, and so cutting off from the several owners small, irregular pieces of land. Takings of this sort naturally cause claims for incidental damages altogether out of proportion to the general appraised value per foot of the same land as represented by lot sales in the neighborhood. While a very large proportion of the claims have been settled successfully, the aggregate of all these items of incidental expense has exhausted the appropriations made, as before noted; and the Commission will be obliged to ask for an appropriation under the Boulevard Act to enable it to settle the balance of claims now outstanding, and to restore amounts supposed to be available for certain takings and construction previously authorized by appropriations which have been exhausted to pay for lands already taken. In view of the uncertainty as to when the matter of apportionment of the district liabilities to the Commonwealth will be determined, the Commission will not urge any further appropriation except for the annual expense of care and maintenance.

As already pointed out, no acquirements of importance have been made during the past year. New work has been chiefly that of Revere Beach Parkway, construction of Mattapan Bridge, a single roadway for Whitmore Brook Entrance to Middlesex Fells, the grading of Manchester Field, and construction commenced on Charles River Road from the Arsenal

to Watertown Landing. Plans have also been prepared for the acquirement and construction of Wellington Bridge, as authorized and directed by chapter 491 of the Acts of 1901. As soon as these plans are approved by the United States Government, the Harbor and Land Commission, the County Commissioners of Middlesex, and the cities of Medford and Somerville, contracts for construction can be made. Mattapan Bridge between Blue Hill Avenue and Blue Hill Parkway at Mattapan is well under way, and will probably be completed early in the coming summer. Revere Beach Parkway is practically completed from Main Street in Everett to Revere Beach, with the exception of the bridge at Revere Station, which is to be provided during the coming year in connection with the abolishment of the grade crossing of the Boston & Maine Railroad at this point. Considerable improvements have been made at Nantasket Beach. The headquarters building has been completed, and plans are under way for a new bath-house. A special report has been prepared for a bath-house and shelter buildings at Nahant Beach, as required by chapter 107 of the Resolves of 1901.

The reservations and parkways have been used by more people during the past year than in any other previous year. The increase has been so marked at the beaches, that, in spite of the large accommodations of previous years, it has been necessary to increase those of the bath-house at Revere Beach by altering the bicycle storage room into a dressing room for boys, and by providing additional sanitary buildings, and to plan for a new bath-house at Nantasket Beach, to be operated under the direct supervision of the Commission. Additional sanitary and shelter buildings are needed at the Revere Street entrance to Revere Beach, and it is hoped that the sanitary building may be provided at once; but no provision can be made for shelters until the present inadequate entrance road and bridge at this point are improved. No important improvements or developments have been made upon the Mystic or Neponset rivers, except cleaning off old buildings and debris. Many claims for takings of land along these rivers are now in suit, and it is deemed wise not to begin greater improvements until after the trial of these suits. Considerable improvements have been made

at small expense by the small forces employed on both the upper and lower portions of Charles River, and the general care and protection extended to the public has made the Speedway more attractive than in any previous year, and has preserved order, added to the general convenience, and resulted in saving 42 lives on the upper river.

The proper care of the woods reservations is in some ways the most difficult problem of each year's work. These reservations have an increasing use from year to year, and it is already apparent that present provisions for safety will soon be inadequate. Keeping down fire has allowed a great increase of the indiscriminate sort of forest growth which shelters all sorts of insect pests, and in which the worst varieties throttle and take sustenance from the better ones, and the development of a fine tree growth becomes a process of "survival of the fittest." Such indiscriminate growth not only retards the development of the better trees, but also in time makes the policing of the reservations more difficult, shuts out the best interior views and the outlook from the hilltops, and makes portions of the reservations almost impenetrable. The care of these reservations therefore seems to require that the most beautiful vistas be kept open; that coarse and indiscriminate trees be eradicated from the sections where the finer and rarer ones will grow; that new ones be planted where fire has destroyed all but scrub growth; and that the tree and shrub growth generally be limited by removal of the weak and diseased kinds, that foster insect pests, and by leaving only so many of healthy and desirable trees as the soil will sustain. Such work done at this time and patiently pursued from year to year according to a definite plan means a small annual outlay, while it insures future economy and an increasing return upon the present investment. The Commission has not yet been able to satisfy itself, nor those expert in forestry matters, in the woods reservations, for the simple reason that the problems of policing and of the building and care of the roads and bath-houses required for present use, added to those of the beach and river requirements, have largely occupied its attention and required all the appropriations placed at its disposal, and for the further reason that the mere mention

of the word "forestry" has seemed to those not familiar with the reservations to suggest extravagance, and to be an unnecessary item of appropriation.

With the increasing public use of the reservations the expense of care and maintenance has somewhat increased, until it now amounts to a very considerable annual sum, and naturally causes some disinclination to further appropriation for anything which seems like an unusual item of care and maintenance, or of the sort which appeals only to those most expert or most conversant with the best method of development. It is therefore likely that such special interests as the care and preservation of the trees, that is, adequate forestry, or the more perfect and beautiful construction of such structures as bridges which it is desirable to build of a monumental character, may be postponed or be impossible, unless they are made to some extent the object of private interest and benefaction. The Metropolitan Park System is now of a size and character which places it within the ranks of the best in the world, and seems worthy of the attention of those wealthy and public-spirited citizens of the Commonwealth whose thought has been so quickened by travel and observation that they wish to create some monumental improvement of the highest usefulness, which shall be at once both a memorial to themselves and an addition to the treasures of the State. It was the hope of the preliminary commission that the time would come when such gifts would be as naturally thought of as those to art museums, hospitals and other institutions of public importance; and provision was therefore made in the original Park Act for a trust fund, to be held by the Treasurer of the Commonwealth, and its income devoted to the specific purposes which might be designated by the donors. Wise gifts of this sort which can be suggested by the Commission are much needed, and may be made of immediate benefit as well as enduring form.

It is a pleasure at the close of the year to record the general enthusiasm and efficiency of the various forces engaged in the care of the reservations and parkways, and their sincere effort to serve the public with fidelity and courtesy. This is true of both the superintendents and of the police and laborers as well. The difficulty of keeping a police force

which requires nearly twice as many men in summer as in winter has been overcome by placing reserve police at work in the reservations during the winter, and by assigning portions of the regular or winter forces in rotation to similar work; and, as a rule, all have cheerfully joined in this assignment. In the general office and engineering forces some reduction has been made by uniting the claims and conveyancing departments, by reducing the numbers employed during the winter in the engineering department, and by assigning to those remaining a greater variety of work.

The usual accompanying reports are submitted herewith, together with a reprint of the reports of the Apportionment Commission and a reprint of the special report by this Commission in the matter of a bath-house at Nahant Beach.

All of which is respectfully submitted,

WILLIAM B. DE LAS CASAS.

EDWIN B. HASKELL.

EDWIN U. CURTIS.

DAVID N. SKILLINGS.

ELLERTON P. WHITNEY.

DEC. 11, 1901.

REPORT OF THE SECRETARY.

Hon. WILLIAM B. DE LAS CASAS,

Chairman Metropolitan Park Commission.

SIR:—I herewith present my report for the year ending Dec. 1, 1901. It is subdivided as follows: 1. Acquisition of lands. 2. Administration. 3. Miscellaneous. 4. Finances.

1. ACQUISITION OF LANDS.

No takings of land have been made this year for any reservations or parkways not already described in previous reports. There have been, however, in some cases additional takings and abandonments affecting the boundaries of several of the existing reservations and parkways, which are noted below. For convenience of reference, I submit a list and short description of the holdings of the Metropolitan Park System, noting under the proper head any changes of importance which have occurred since the last report.

Blue Hills Reservation.

This is a forest reservation, including within its limits the entire range of the Blue Hills and several ponds. Its total area is 4,857.96 acres, of which 2,562.57 acres are in the city of Quincy, 1,499.42 acres in the town of Milton, 67.84 acres in the town of Braintree, 471.13 acres in the town of Canton and 257 acres in the town of Randolph.

Middlesex Fells Reservation.

This is a forest reservation, which, with the holdings of the Metropolitan Water Board and the local boards of Medford and Winchester, includes substantially all of the region which, on account of its peculiar characteristics, has been known for many years as the Middlesex Fells. This Com-

mission directly controls 1,882.95 acres, of which 726.15 acres are in the town of Stoneham, 177.54 acres in the city of Melrose, 59.57 acres in the city of Malden, 669.08 acres in the city of Medford and 250.61 acres in the town of Winchester. The area of Water Board holdings is 1,145.03 acres, which, under an agreement with these boards, is used by the public in the same manner and to the same extent as the park lands. This makes the Fells a public reservation of 3,027.97 acres. There are many beautiful sheets of water in the Fells, of which the largest and best known is Spot Pond, now the northern distributing reservoir of the Metropolitan Water System. Through an unavoidable error, omission was made in the last report of the name of Mr. Shepard Brooks as one of the givers of land for the Whitmore Brook Entrance to the Middlesex Fells from West Medford.

Stony Brook Reservation.

This is a forest reservation, of 463.72 acres, of which 195.16 acres are in the city of Boston and 268.56 acres in the town of Hyde Park. Turtle Pond, the source of Stony Brook, is situated in the centre of the reservation, and there is also a skating pond at the Hyde Park boundary.

Beaver Brook Reservation.

This reservation contains 58.35 acres, of which 15.58 acres are in the town of Belmont and 42.77 acres are in the city of Waltham. In the northerly part of the reservation, which is beautifully wooded, are two ponds and a picturesque cascade. In the southern portion are the Waverley Oaks.

Hart's Hill Reservation.

This reservation, which contains 23.09 acres, was acquired in co-operation with the town of Wakefield, which paid one-half of the cost thereof. The lands, which comprise a wooded hill commanding an extensive view of that portion of the district, have been transferred to the care and control of the Park Commission of the town, which assumes the cost of its maintenance. Hart's Hill immediately overlooks Crystal Lake, in the southern portion of Wakefield.

Hemlock Gorge Reservation.

This reservation is at the head of the takings on the Charles River, and contains 23.11 acres, of which 4.27 acres are in the city of Newton, 14.24 acres in the town of Needham and 4.60 acres in the town of Wellesley. In addition to the ledges which give the reservation its name, it contains an interesting tree growth. The reservation is bisected by the Sudbury River Aqueduct of the Metropolitan Water System, which here crosses the Charles River by Echo Bridge with its single span of 129 feet.

Charles River Reservation.

This longest of the river reservations extends, with slight breaks in continuity, from Hemlock Gorge at Newton Upper Falls to Essex Street Bridge at Cottage Farms in Boston, a distance of $16\frac{1}{2}$ miles. It contains 562.84 acres of river bank of varying width, of which 143.43 acres are in the city of Boston, 38.07 acres in the city of Cambridge, 124.09 acres in the city of Newton, 38.20 acres in the city of Waltham, 75.21 acres in the town of Watertown, 76.71 acres in the town of Weston and 67.13 acres in the town of Wellesley. This year a strip of land for a canoe way has been taken at Newton Lower Falls, between the Cordingly and Crehore Mills.

Mystic River Reservation.

This reservation includes the greater part of the river banks from Weir Bridge at the outlet of the lower Mystic Pond to Cradock Bridge in Medford. From this point to Wellington Bridge the banks in Medford have been acquired by that city, and will later be transferred to this Commission for development. The whole reservation (including the lands to be transferred by the city of Medford) contains 289.44 acres, of which 15.18 acres are in the town of Arlington, 265.43 acres in the city of Medford and 8.83 acres in the city of Somerville. The distance from Weir Bridge to Wellington Bridge is 5 miles.



REVERE BEACH RESERVATION.— A SATURDAY AFTERNOON.



Neponset River Reservation.

This reservation begins with the broad reaches of the Fowl Meadows at Green Lodge Street in Canton and Dedham. Below Paul's Bridge the takings are of such portions of the banks as could be obtained within the limits of the appropriations without interfering with important manufacturing plants. Below Milton Lower Mills the takings, however, include practically all the Neponset Marshes down to Granite Avenue Bridge, where the reservation ends. The total area of the river banks acquired is 928.83 acres, of which 81.36 acres are in the city of Boston, 271.75 acres in the town of Milton, 265.41 acres in the town of Canton, 68.21 acres in the town of Hyde Park, 234.70 acres in the town of Dedham and 7.40 acres in the town of Westwood. In several places slight changes have been made this year in the boundary line, to facilitate settlement and reduce the cost.

King's Beach and Lynn Shore Reservations.

These reservations, though taken at different times, practically form one reservation, which includes, substantially, all of King's Beach in Swampscott and Lynn. The total length of the beach is .69 mile and the area of the upland is 10.81 acres, of which 3.30 acres are in the town of Swampscott and 7.51 acres in the city of Lynn. The original plan for the Lynn Shore Reservation provided for its continuation along the shore to the beginning of the Nahant Beach Parkway; but the first appropriation was insufficient to carry out the entire plan, and no further appropriation has been made for this purpose.

Revere Beach Reservation.

This reservation is wholly in the town of Revere. It contains 67.34 acres of upland, and the beach, which extends from the Point of Pines to Beachmont, is 2.71 miles in length.

Winthrop Shore Reservation.

This reservation is wholly in Winthrop. It contains 16.74 acres, and the portion of the beach acquired from Grover's Cliff to the foot of Great Head is 1.32 miles in length.

Quincy Shore Reservation.

This reservation includes the shore on Boston harbor in Quincy from Moswetusset Hummock on the peninsula of Squantum to the National Sailors' Home on Black's Creek, together with lands for a connection at one end with Hancock Street at Atlantic and at the other with Merry Mount Park, an open space of the city of Quincy. It contains 37.97 acres of upland, and the length along the shore is 2 miles.

Nantasket Beach Reservation.

The portion of the beach acquired for the reservation extends northerly from Atlantic Hill 1.017 miles. The portion of Nantasket Avenue abutting on the reservation is also under the control of this Commission, by a special statute. A parcel of land in the rear of Nantasket Avenue and between that street and the railroad station and steamboat wharf was also acquired as a part of the reservation, and is mostly used for administrative purposes. The area of upland in the reservation is 24.51 acres.

Blue Hills Parkway.

This parkway extends from the Neponset River at Mattapan Square to the Blue Hills. Its total length is 2.28 miles. It is all in Milton, with the exception of the lands on the Boston bank of the river taken this year to provide for the abutments of the Mattapan Bridge now in course of building. In connection with these takings and in carrying out agreements with the New York, New Haven & Hartford Railroad, exchanges of land were made with the railroad company to provide for a new station in place of the old Mattapan station, which had to be removed to make way for the approaches to the new bridge. This parkway has already been constructed from the river to Canton Avenue, and a short connection from this point has also been made to Harland Street.

Middlesex Fells Parkway.

This parkway is divided into three sections: Fellsway, 2.442 miles long; Fellsway East, 1.114 miles long; and Fellsway West, 1.049 miles long, — a total of 4.605 miles,

of which .74 mile is in the city of Somerville, 2.35 miles in the city of Medford and 1.515 miles in the city of Malden. There has been no change in its boundaries since the last report. Plans for some slight changes, however, are in preparation to provide proper approaches to the bridge which the Commission is about to build across the Mystic River. This parkway has been constructed its entire length from Broadway Park in Somerville to both the eastern and western sections of the Middlesex Fells.

Revere Beach Parkway.

This is the longest parkway of the system. Starting from the point of intersection in Medford of the Middlesex Fells Parkway and the proposed north border road of the Mystic River Reservation, it runs to the Malden River, and passes through Everett, Chelsea and Revere to the southern end of the Revere Beach Reservation. Its entire length is 5.24 miles, of which .482 mile is in the city of Medford, 1.653 miles in the city of Everett, .814 mile in the city of Chelsea and 2.291 miles in the town of Revere. Early in the spring construction will have been completed from Main Street in Everett to Revere Beach, with the exception of a short section in Revere at the Winthrop Avenue crossing of the Boston & Maine Railroad. Takings and abandonments have been made this year between Mill Street and Campbell Avenue, in order to join with the railroad in constructing an overhead bridge for the highway and parkway combined at a point just south of the Revere Beach station on the main line of the Eastern Division. By these changes the original route along the shore of Snake Creek is abandoned from where it is crossed by the railroad, and the parkway runs parallel with Winthrop Avenue from the railroad crossing to Sales Creek. Some slight takings and abandonments have also been made during the progress of the work in arranging entrances for streets and facilitating settlements.

Mystic Valley Parkway.

This parkway extends from Weir Bridge at the foot of the lower Mystic Lake in Medford and Arlington to the western entrance of the Middlesex Fells. It first skirts along the

Mystic Lakes, its width in several places giving it a parklike character. It crosses the Aberjona River at its entrance into the upper Mystic Lake, and from that point includes both banks of the river up to the Winchester station at Manchester Field, a playground established in co-operation with the town and the Metropolitan Water and Sewerage Board. The remainder of the parkway is of a more conventional type, extending through Winchester up the steep slope of the hills to the boundary line of the Fells. The whole length of the parkway is 2.90 miles, of which 1.12 miles are in the city of Medford and 1.78 miles in the town of Winchester, and its construction is complete. A slight taking to discontinue the awkward entrance of Myrtle Street was made this year and some slight additional pieces of land have been acquired without additional cost in settlements with claimants.

West Roxbury Parkway.

Lands for this parkway to connect the Arnold Arboretum and the Boston Park System with the Stony Brook Reservation were acquired in 1894 under the original park act. Under an agreement with the city of Boston, which took land extending from the Arnold Arboretum to Weld Street in West Roxbury, the Commission made a taking of a strip of land from Weld Street to and including Bellevue Hill, and immediately transferred this land to the Park Commission of the city of Boston, by whom the parkway will be ultimately constructed. The total length of this parkway is 2.42 miles, of which 1.51 miles taken by this Commission lie wholly in that part of Boston known as West Roxbury.

Neponset River Parkway.

This parkway will continue to the Blue Hills the roadway already partly constructed through Stony Brook Reservation in continuation of the lines of the West Roxbury Parkway. Lands for the Neponset River Parkway have already been acquired from the southern end of the Stony Brook Reservation to Neponset River and along the river bank to Paul's Bridge, a distance of 1.12 miles. No construction has yet been undertaken, and the remaining link between Paul's

Bridge and Great Blue Hill has not yet been acquired. Of the portion already taken .72 mile is in the town of Hyde Park and .40 mile in the town of Milton.

Fresh Pond Parkway.

This parkway is the first section of a parkway intended to connect the takings on Charles River with those along the Mystic River, and thus with the Mystic Valley Parkway and the Fells. It is wholly in Cambridge, extending from Gerry's Landing back of the Cambridge Hospital to Fresh Pond. The portion which has been constructed is .52 mile long.

Furnace Brook Parkway.

This parkway is wholly in Quincy and is intended to furnish a connection between Quincy Shore and the Blue Hills. It is 2.54 miles in length, and no part of it has yet been constructed.

Nahant Beach Parkway.

This parkway, wholly in Nahant, extends from Oceanside at the Lynn line across Long Beach and along Little Nahant to the end of Short Beach. The entire length is 2.23 miles, and no construction has been undertaken. The taking for the greater part of the way extends across from the ocean shore to Lynn harbor, with the exception of the travelled highway in the centre, over which the town of Nahant still retains jurisdiction.

Lynnway.

This is the name adopted for the parkway which will extend from Revere Beach in the rear of the Point of Pines across the Saugus River to Lynn. It connects on the Lynn Shore with a State Highway. As the latter has not been constructed, no occasion has arisen for constructing the parkway and bridge. The total length of the parkway, including the bridge, will be .69 mile, of which .57 mile is in Revere and .12 mile in Lynn.

The following tables give the present areas of the reservations and lengths of the parkways:—

Reservations.

	Acres.
Blue Hills,	4,857.96
Middlesex Fells,*	1,882.95
Stony Brook,	463.72
Beaver Brook,	58.35
Hart's Hill,	23.09
Hemlock Gorge,	23.11
Charles River,	562.84
Mystic River,	289.44
Neponset River,	928.83
King's Beach and Lynn Shore,	10.81
Revere Beach,	67.34
Winthrop Shore,	16.74
Quincy Shore,	37.97
Nantasket Beach,	24.51
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	9,247.66

Parkways.

	Miles.
Blue Hills,	2.280
Middlesex Fells,	4.605
Revere Beach,	5.240
Mystic Valley,	2.900
West Roxbury,	1.510
Neponset River,	1.120
Fresh Pond, . . . . .	.520
Furnace Brook,	2.540
Nahant Beach,	2.230
Lynnway, . . . . .	.690
	<hr/>
	23.635

2. ADMINISTRATION.

The general offices and engineering department continue to be located in the Congregational Building, at 14 Beacon Street. The Commission has again been notified that no room is available at present for these purposes in the State House. The present situation, however, has proved convenient for the work of the Commission. The general form of administration remains substantially unchanged, the Secretary acting as the executive officer of the Commission, and the departments reporting through him to the Commission. The development and increasing use of the reservations and parkways has materially increased the amount of detail to be handled in the general office. This, however, has been com-

* Not including 1,145.03 acres of Water Works Reservations under the care and control of this Commission.

		RESERVATIONS (ACRES).													PARKWAYS (MILES).														
		Blue Hills.	Middlesex Fells.	Stony Brook.	Bever Brook.	Hart's Hill.	Hemlock Gorge.	Charles River.	Mystic River.	Neponset River.	King's Beach and Lynn Shore.	Revere Beach.	Winthrop Shore.	Quincy Shore.	Nantasket Beach.	Total Acres.	Blue Hills.	Middlesex Fells.	Revere Beach.	Mystic Valley.	West Roxbury.	Neponset River.	Fresh Pond.	Furnace Brook.	Nahant Beach.	Lynnway.	Total Miles.		
<i>Cities.</i>																													
1	Boston,	-	-	195.16	-	-	-	143.43	-	81.36	-	-	-	-	-	419.95	.030	-	-	-	1.510	-	-	-	-	-	1.540	1	
2	Cambridge, . . .	-	-	-	-	-	-	38.07	-	-	-	-	-	-	-	38.07	-	-	-	-	-	-	.520	-	-	-	.520	2	
3	Chelsea,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.814	-	-	-	-	-	-	-	.814	3	
4	Everett,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.653	-	-	-	-	-	-	-	1.653	4	
5	Lynn,	-	-	-	-	-	-	-	-	-	7.51	-	-	-	-	7.51	-	-	-	-	-	-	-	-	.120	-	.120	5	
6	Malden,	-	59.57	-	-	-	-	-	-	-	-	-	-	-	-	59.57	-	1.515	-	-	-	-	-	-	-	-	1.515	6	
7	Medford,	-	669.08	-	-	-	-	-	265.43	-	-	-	-	-	-	934.51	-	2.350	.482	1.120	-	-	-	-	-	-	3.952	7	
8	Melrose,	-	177.54	-	-	-	-	-	-	-	-	-	-	-	-	177.54	-	-	-	-	-	-	-	-	-	-	-	-	8
9	Newton,	-	-	-	-	-	4.27	124.09	-	-	-	-	-	-	-	128.36	-	-	-	-	-	-	-	-	-	-	-	-	9
10	Quincy,	2,562.57	-	-	-	-	-	-	-	-	-	-	37.97	-	-	2,600.54	-	-	-	-	-	-	-	2.540	-	-	2,540	10	
11	Somerville, . . .	-	-	-	-	-	-	-	8.83	-	-	-	-	-	-	8.83	-	.740	-	-	-	-	-	-	-	-	.740	11	
12	Waltham,	-	-	-	42.77	-	-	38.20	-	-	-	-	-	-	-	80.97	-	-	-	-	-	-	-	-	-	-	-	-	12
13	Woburn,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
<i>Towns.</i>																													
14	Arlington,	-	-	-	-	-	-	-	15.18	-	-	-	-	-	-	15.18	-	-	-	-	-	-	-	-	-	-	-	-	14
15	Belmont,	-	-	-	15.58	-	-	-	-	-	-	-	-	-	-	15.58	-	-	-	-	-	-	-	-	-	-	-	-	15
16	Braintree,	67.84	-	-	-	-	-	-	-	-	-	-	-	-	-	67.84	-	-	-	-	-	-	-	-	-	-	-	-	16
17	Brookline,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
18	Canton,	471.13	-	-	-	-	-	-	-	265.41	-	-	-	-	-	736.54	-	-	-	-	-	-	-	-	-	-	-	-	18
19	Cohasset,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
20	Dedham,	-	-	-	-	-	-	-	234.70	-	-	-	-	-	-	234.70	-	-	-	-	-	-	-	-	-	-	-	-	20
21	Dover,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
22	Hingham,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
23	Hull,	-	-	-	-	-	-	-	-	-	-	-	-	-	24.51	24.51	-	-	-	-	-	-	-	-	-	-	-	-	23
24	Hyde Park,	-	-	268.56	-	-	-	-	68.21	-	-	-	-	-	-	336.77	-	-	-	-	.720	-	-	-	-	-	.720	24	
25	Milton,	1,499.42	-	-	-	-	-	-	271.75	-	-	-	-	-	-	1,771.17	2.250	-	-	-	.400	-	-	-	-	-	2.650	25	
26	Nahant,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.230	-	-	2.230	26	
27	Needham,	-	-	-	-	-	14.24	-	-	-	-	-	-	-	-	14.24	-	-	-	-	-	-	-	-	-	-	-	-	27
	[Randolph], . . .	257.00	-	-	-	-	-	-	-	-	-	-	-	-	-	257.00	-	-	-	-	-	-	-	-	-	-	-	-	27
28	Revere,	-	-	-	-	-	-	-	-	-	-	67.34	-	-	-	67.34	-	-	2.291	-	-	-	-	-	.570	-	2.861	28	
29	Saugus,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29
30	Stoneham,	-	726.15	-	-	-	-	-	-	-	-	-	-	-	-	726.15	-	-	-	-	-	-	-	-	-	-	-	-	30
31	Swampscott, . . .	-	-	-	-	-	-	-	-	3.30	-	-	-	-	-	3.30	-	-	-	-	-	-	-	-	-	-	-	-	31
32	Wakefield,	-	-	-	-	23.09	-	-	-	-	-	-	-	-	-	23.09	-	-	-	-	-	-	-	-	-	-	-	-	32
33	Watertown,	-	-	-	-	-	-	75.21	-	-	-	-	-	-	-	75.21	-	-	-	-	-	-	-	-	-	-	-	-	33
34	Wellesley,	-	-	-	-	-	4.60	67.13	-	-	-	-	-	-	-	71.73	-	-	-	-	-	-	-	-	-	-	-	-	34
35	Weston,	-	-	-	-	-	-	76.71	-	-	-	-	-	-	-	76.71	-	-	-	-	-	-	-	-	-	-	-	-	35
36	Westwood,	-	-	-	-	-	-	-	7.40	-	-	-	-	-	-	7.40	-	-	-	-	-	-	-	-	-	-	-	-	36
37	Weymouth,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37
38	Winchester,	-	250.61	-	-	-	-	-	-	-	-	-	-	-	-	250.61	-	-	1.780	-	-	-	-	-	-	-	1.780	38	
39	Winthrop,	-	-	-	-	-	-	-	-	-	-	16.74	-	-	-	16.74	-	-	-	-	-	-	-	-	-	-	-	-	39
		4,857.96	1,882.95	463.72	58.55	23.09	23.11	562.84	289.44	928.83	10.81	67.34	16.74	37.97	24.51	9,247.66	2.280	4.605	5.240	2.900	1.510	1.120	.520	2.540	2.230	.690	23.635		

pensated for to some extent by the practical cessation in land takings, so that it has not been necessary to increase the office force. Owing to the progress made in settlement of land claims, it has also been possible to combine the departments of law and claims into one.

Landscape Architects.

The Commission still retain Messrs. Olmsted Brothers as landscape advisers, but the character and amount of the services required of them has naturally changed with the work of the Commission. Their opinions have been required on matters relating to works of construction, location of roads, forestry and plans for future development so far as required for meeting present problems. Their report, printed with this report, gives in detail the work they have been called upon to do.

Engineering Department.

This department has been engaged this year in three important pieces of construction. The portion of the Revere Beach Parkway between Main Street in Everett and Campbell Avenue in Revere has been substantially completed, with the exception of the railroad bridge and approaches where it crosses the Boston & Maine Railroad near the Revere station. This work will be done in the spring by the railroad under the supervision of the Engineer of this Commission, in connection with the separation of the Winthrop Avenue grade crossing under a decree of the Superior Court. This delay, however, is not likely to interfere with the early opening of the parkway, which can be used at once in connection with the existing highway. Mattapan Bridge has been well started, and should be completed by the middle of the coming summer. A diagram and description of this bridge will be found in the report of the Engineer. This bridge not only furnishes an adequate connection between Blue Hill Avenue and the Blue Hills Parkway, but also provides a much-needed improvement in the approach to an important part of Milton. Work has also been begun this year under a special appropriation on a section of Charles River Road in Watertown between the United States Arsenal and Watertown

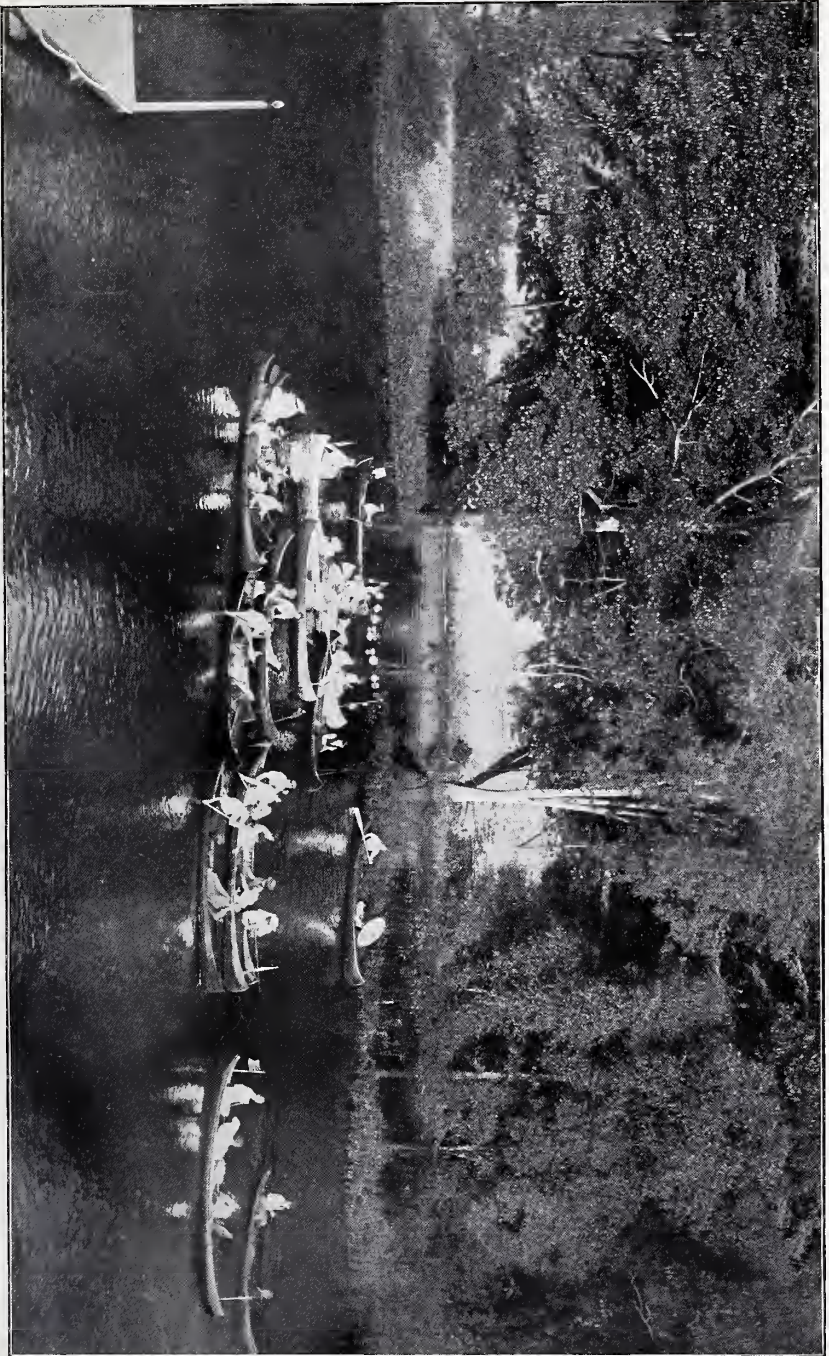
Square. This is the second section of road to be built according to the plan of the Landscape Architects, to provide in the takings, where practical, for a road upon one side of the river along the valley of the Charles in the District. The Engineer has also completed plans for Wellington Bridge and its approaches, which is to carry Fellsway and Middlesex Avenue across the Mystic River from Somerville into Medford. This bridge was authorized and a special appropriation of \$200,000 made therefor by the Legislature of 1901. It will be a pile bridge, 1,145 feet long and 70 feet wide, containing a retractile draw with an opening of 50 feet. Manchester Field, the playground in Mystic Valley Parkway near the Winchester station, has been substantially completed. One roadway in Whitmore Brook Entrance from West Medford into the Fells has been built. Supervision has also been furnished by this department for minor work in the reservations and parkways, the particulars of which appear in the report of the Engineer.

Among the topographical surveys made this year are those of Nahant Beach, and portions of Charles River Reservation and the H. L. Pierce devise in the Blue Hills Reservation. Considerable progress has been made in preparing construction plans for parkways and boundary roads in advance of actual construction. This work is important, in order that owners of lands abutting on the park holdings may know as early as possible what will ultimately be the requirements of entrances, especially as to grade. The Engineering Department has also made at regular periods an inspection of the bridges for the care of which the Commission is responsible. The usual number of plans have been prepared, required in the trial of cases and settlement of claims. A considerable reduction was made in the force of this department in the early part of the year.

Law and Claims Department.

The trial of cases against the Commonwealth arising out of the work of the Commission is by law conducted by the Attorney-General's department; but the preparation of takings, deeds, contracts and other legal papers, the search of titles and general office business, is conducted by the law

CHARLES RIVER RESERVATION.—FLOAT DAY.



department at the office of the Commission, in charge of attorneys approved by the Attorney-General. The negotiation of settlements with claimants and preparation of data for making of awards and assessments of betterments have also made it necessary to maintain a claim department, in charge of a competent attorney. The fact that no additional takings of importance have been made this year and that good progress has been made in the disposition of outstanding claims has made it possible this fall to combine these two departments into one, under the charge of George L. Rogers, Esq., who has Stanley M. Bolster, Esq., as his assistant. During the year 296 claims, amounting to \$587,036.47, have been settled. Of these claims, 193 were for lands taken for reservations, amounting to \$396,689.26; and 103 were for lands taken for parkways, amounting to \$190,347.21. These claims were divided, by reservations, as follows: Charles River, 53; Winthrop Shore, 11; King's Beach, 1; Lynn Shore, 3; Stony Brook, 6; Mystic River, 33; Neponset River, 37; Middlesex Fells, 6; Quincy Shore, 6; Hart's Hill, 2; Revere Beach, 6; Nantasket Beach, 29. The parkway claims were divided as follows: Revere Beach, 45; Furnace Brook, 36; Mystic Valley, 4; Neponset River, 3; Middlesex Fells, 12; Blue Hills, 3. Of the total of 296 claims settled, suit was brought on 50, of which 11 were actually tried and a verdict obtained, the remaining 39 being settled before trial was reached; 246 claims were settled without suit. There are now outstanding unsettled claims to the number of 325, of which 218 are claims for lands taken for reservations and 107 for lands taken for parkways. Those for reservation lands are divided as follows: Hemlock Gorge, 1; Middlesex Fells, 1; Charles River, 64; Neponset River, 67; Mystic River, 51; Revere Beach, 3; Nantasket Beach, 6; Quincy Shore, 13; Winthrop Shore, 10; Lynn Shore, 2. Those for parkway lands are divided as follows: Revere Beach, 66; Middlesex Fells, 9; Neponset River, 3; Mystic Valley, 7; Fresh Pond, 3; Furnace Brook, 16; Nahant Beach, 3. Of the total of 325 claims outstanding, suits have been brought on 142 at the date of this report. It is not necessary to give in detail the work of this department, but a consideration of the number and

amount of claims disposed of will indicate, to any one familiar with legal work, the importance of the work accomplished since the date of the last report.

Superintendence.

The Commission does not employ a general superintendent, but makes the local superintendents directly responsible, through the Secretary to the Commission, for the care and order of the lands in their charge. In several cases, however, reservations and parkways which can be conveniently grouped together are placed in the charge of a single superintendent. By this means it has been possible to provide supervision for additional reservations and parkways without increasing the number of superintendents. The increase in police work due to these additional acquisitions has been provided for by appointing sergeants of police to assist the superintendents in police work.

The Secretary also has the assistance of the Supervisor of Construction, who visits the reservations and parkways, advising the superintendents as occasion requires, and taking special charge of any construction work of importance done by the forces employed by the Commission. The past year has seen a marked increase in the use of the park system, and the work of policing has been especially arduous during the summer months. The number of the regular police has been added to during the summer months for several years by temporary officers furnished through the Civil Service Commission, who rank as reserve officers and are laid off at the end of the season. During the winter months the Commission has, to such extent as it felt was economical, given those reserve officers desiring work positions in the laboring force of the reservations. Regular officers are also expected to take their turn at work in the reservations when there is no police work required. This method has been found to be of benefit both to the police and to the work of the Commission. Instead of periods of inactivity, which are distasteful to strong and vigorous men, such as police officers should be, the men are engaged in different employments as the occasion demands, mostly in the open air, and the Commission, on the other hand, has a body of men to use as police when-

ever needed, with whose characters and abilities they are more acquainted from year to year. The total police force employed during the summer was 81, which was reduced in October to 57. The order in the reservations has been excellent, and the number of arrests made remarkably small in proportion to the number of people visiting the reservations and using the parkways. For example, the whole number of arrests during the year at Revere Beach has been 90, and at Nantasket Beach 116. Nearly all these arrests were for minor offences. Considering the enormous crowds which the intense heat of last summer brought to these beaches, the small number of offences seems remarkable.

The Commission now employs seven superintendents, and their headquarters and work are divided as follows: —

Supt. Frank Dings, headquarters Hillside Street, Milton, Blue Hills Reservation, also has charge of Stony Brook, Neponset River and Quincy Shore reservations, and Blue Hills, Furnace Brook and Neponset River parkways; Supt. Charles P. Price, headquarters Pond Street, Stoneham, Middlesex Fells Reservation, also has charge of Mystic River Reservation and Middlesex Fells and Mystic Valley parkways; Supt. Herbert W. West, headquarters Revere Beach Reservation, also has charge of Winthrop Shore, King's Beach and Lynn Shore reservations and Revere Beach and Nahant Beach parkways; Supt. John L. Gilman, headquarters Speedway, Brighton, has charge of the lower part of the Charles River Reservation, extending from Cottage Farms to Moody Street Dam, Waltham, and of Fresh Pond Parkway in Cambridge; Supt. Albert N. Habberley, headquarters Weston Bridge, Auburndale, has charge of Riverside section, Charles River Reservation, from Moody Street Bridge to Newton Upper Falls, and Hemlock Gorge Reservation; Supt. Moody Leighton, headquarters Nantasket Beach, has charge of the reservation of that name; Supt. Robert Elder, headquarters Mill Street, Belmont, has charge of Beaver Brook Reservation. The details of the work in these reservations and parkways here follow: —

In the *Blue Hills Reservation* there has been the usual work incident to the care of the forest reservations, of caring for the roads and paths, cutting out of boundaries and fire

guards, and in the spring and fall and during dry seasons of watching for fires and extinguishing them whenever they occur. No extensive or destructive fire has occurred this year, although several threatening ones have started. The immunity from fire in the Blue Hills has added much to the tree growth; but this advantage alone is not sufficient to replace the sprout and inferior growth with trees of a better and more suitable character. Each year the Commission has done something, with the limited funds available for this purpose, towards restoring the natural forest, which has disappeared by reason of the frequent fires and cuttings of a long series of years. This year the deciduous sprout growth has been removed from around pine seedlings in the valley between Hemenway and Hancock hills, at Breakneck Ledge and on the western slope of Chickatawbut. Similar work was done around Barberry Bush Spring. Undergrowth was also removed about the pines at Pine Tree Brook Entrance, encouraging the growth and making a better opportunity for picnicking. Some forestry work was also done south-west of Hoosicwhisick Pond. Eleven hundred seedlings from Wolcott Pines and Pine Tree Brook Entrance were replanted on the slopes of Hancock and Hemenway hills. Dead and fallen trees have been removed from the sides of the one administration road which runs through the centre of the reservation. Hillside Street within the reservation has been repaired and partly relocated. The special appropriation made last year for this purpose carried the work from the southern boundary to headquarters, and an equal amount is needed this year to complete the remaining portion of the street for which the Commonwealth is responsible to the public. Marigold Lodge, the shelter and lunch stand at Hoosicwhisick Pond, has been painted and otherwise improved, and was kept open by the lessee until the close of the season. The boats on the pond have been largely used, and the usual numbers have visited the top of Great Blue Hill. Hoosicwhisick Pond and Great Blue Hill are the best known and most visited points of interest, but a larger number is each year becoming acquainted with the other equally interesting features of the reservation, a part of the charm of which is their seclusion and less accessibility.

Blue Hills Parkway will not attain its full usefulness until construction shall have been continued from Canton Avenue into the reservation itself. Nevertheless, in connection with Harland and Hillside streets it already furnishes to the driving and riding public a direct means of approach from Mattapan Square to the centre of the reservation. The building of Mattapan Bridge, connecting the parkway with Blue Hill Avenue in Boston, has already been referred to. That portion of Harland Street within the boundaries of the parkway has been repaired and improved this year. Just beyond Canton Avenue, where the parkway broadens out to the width of the valley of Pine Tree Brook, a dam has been built which will provide a skating pond.

At *Quincy Shore*, where no construction has yet been done, nothing has been required beyond posting and clearing up of rubbish. In a portion of the lands taken on *Furnace Brook Parkway* a section of the high-level sewer of the Neponset System of the Metropolitan Sewerage System is being built, and the surplus material is being so deposited as to lessen the expense in building the road which will ultimately be built by this Commission.

Stony Brook Reservation calls for no special mention, as the work there has been only the routine work common to all the wooded reservations. Along the *Neponset River* considerable progress has been made in clearing up rubbish, and something done towards the preservation of the existing tree growth. A small amount of tree planting has also been done. Near Mattapan private land owners have been permitted to construct an extension of an existing private way, known as Edgewater Drive, over the reservation to River Street. This has rendered necessary the removal of several old buildings.

The regular work of the *Middlesex Fells Reservation* is of much the same character as that of the Blue Hills. There is, however, a much larger amount of travelled roads to care for, and this year good progress has been made towards putting both town and interior roads into good condition. The work of the Metropolitan Water Board about Spot Pond and Fells Reservoir, and consequent relocation of roads, is completed. Early this coming year the work on Bear Hill

Reservoir will be finished and any unusual use of the roads thereafter is not anticipated. It should be possible, therefore, with a small appropriation, to have the existing roads, so far as surface is concerned, in good condition by next summer. It will not be many years, however, before the location of permanent roads in the Fells will have to be determined, and the Commission have made considerable progress in accumulating data for the proper consideration of this problem when it arises. Considerable time and labor have been expended in fighting the insect pests which have threatened the tree growth of this reservation. The cessation of the work of the Gypsy Moth Committee of the Board of Agriculture made it necessary for the Commission to fight the gypsy and brown-tail moths, which were present in large numbers in certain sections of the Fells. A number of laborers familiar with this kind of work have been employed at favorable seasons in destroying caterpillars, pupæ and egg-clusters. A record has been kept of the destruction of 44,534 egg-clusters, and much more useful work of this kind can be done at a later season. In this connection the Commission has to acknowledge receipt from the Board of Agriculture of a considerable quantity of tools, apparatus, furniture, etc., which was disposed of under a statute passed by the last Legislature. In the line of forestry, rescue work has been carried on along the Medford-Winchester border road, Quarry Road, Rifle Pond and in the Malden section. Some improvements in the shape of additional sheds, storage buildings, etc., have been made at headquarters, and a water supply has been provided through the courtesy of the Metropolitan Water and Sewerage Board.

The *Middlesex Fells Parkway* has required, like other parkways, policing, lighting, watering and repairs. The railroad bridge of the Medford Branch of the Boston & Maine Railroad has been replanked, and gutters have been built on the sides of the approaches to the bridge. The *Mystic Valley Parkway* contains many fine trees, and it has been necessary to remove from them the nests both of the gypsy and brown-tail moths. The near completion of Manchester Field, which is a part of the reservation, has already

been mentioned. A drinking fountain has been located at a point near the Medford-Winchester line. No construction work has been undertaken in the *Mystic River Reservation*, but a number of old buildings have been removed and a little grading done near Cradock's bridge.

Beaver Brook Reservation is visited each year by an increasing number of people. It has been kept as nearly as possible without change, for its rural character is one of its greatest attractions. The Waverley oaks and other specimens of fine old trees have had special attention, and during the winter months the ponds have had considerable attention in order to make them safe and comfortable for skating. During the summer the electric car line has brought large numbers of picnickers, who make arrangement to reach this reservation from all parts of the district by special cars. Probably not less than one hundred and fifty thousand people have visited this reservation during the season. Every one is free to wander over the grass and through the shrubs and trees in every direction, but no instance of wilful damage has occurred. Considerable work, however, is required in keeping the reservation in good order during the picnicking season. Additional sanitary accommodations have been provided this year in the lower part of the reservation, and needed repairs have been made to the house occupied by the Superintendent. The course of Beaver Brook has been slightly changed in the reservation, to meet the improvements made by the widening of the street and changes in the culvert across Trapelo Road made by the town of Belmont and city of Waltham.

Hemlock Gorge Reservation and *Riverside Section of Charles River Reservation* have been administered together the past year. The border roads on the Newton side from Newton Upper Falls to Newton Lower Falls, which was practically completed last year, was put in shape and opened last spring. In several places trees and shrubs have been planted which in time will screen the view of buildings from the river. Several groves of trees which have suffered from previous neglect have been cleared of dead wood and other rubbish, and the growth encouraged. At Forest Grove a

number of unsightly buildings have been removed. At Moody Street Bridge in Waltham the removal of old buildings has opened the view up the river. The site of these buildings has been graded over and planted, and necessary fences erected for the safety of the public and the protection of these lands. The city of Newton, under an arrangement with this Commission, authorized by an act of the last Legislature, is laying a sewer through the Hemlock Gorge Reservation. Every precaution is being taken to avoid injury to the reservation during the progress of the work. The floats at the canoe carries at Newton Upper Falls have been renewed. There has been an increase in the use of the river for pleasure boating. The boat houses have been unable to meet the increasing demand for lockers in the Riverside section. The usual police patrol has been maintained on the river. A good many accidents have occurred, due to carelessness and inexperience. Forty-two persons have been taken from the water by the police, but no fatality has occurred.

In the *Speedway Section of Charles River Reservation* the main part of the work has been confined to the Speedway itself. The surface of the Speedway has been kept in satisfactory condition, and its use by the driving public steadily increases. In June the driving clubs about Boston held a parade under regulations approved by the Commission. Unpropitious weather made two postponements necessary, but at last the parade took place on May 29. It was witnessed by a large number of people, and gave much pleasure. The dike has been repaired wherever settlements have shown themselves, and the upper road has been resurfaced where needed. Harvard College has completed its boat house at the lower end, and also the fence around Soldiers' Field. The lease of Heaton's Wharf, just opposite Soldiers' Field, expired April 1, and the unsightly buildings were at once removed. The cities of Cambridge and Boston, however, have not yet rebuilt the Boylston Street Bridge, which is generally admitted to be inadequate and unsafe. Above the Speedway something has been done towards improvement of the banks by removal of old buildings and rubbish. At



CHARLES RIVER RESERVATION.—THE SPEEDWAY PARADE.



Watertown Square some of the buildings formerly occupied by the Walker-Pratt Company have been taken down. In *Fresh Pond Parkway* and *Lowell Memorial Park* planting has been carried out on the design furnished by the Landscape Architects, and a number of dead trees removed. The roadway and walk at Gerry's Landing in the rear of the Cambridge Hospital have also been put in better shape.

Revere Beach Reservation still continues to be the most extensively used of all the holdings of the Metropolitan Park System. The attendance this year has been greater than ever before, and has been materially increased by the building of several structures for popular entertainment of various kinds on private lands adjacent to the reservation. During the winter season the regular police and laboring force were occupied, under the direction of the Superintendent, in putting things in order for the summer season. All exposed work in the bath-house and shelters has been painted this year. Twelve new wells have been driven, to provide an added supply to the water system, which furnishes water for the use of the laundry, police station and bath-house, and for watering the driveway. All machinery has been thoroughly overhauled, and additional stand-pipes and hydrants installed for fire protection. As soon as the weather was favorable, the driveway and sidewalks from Beach Street to Revere Street were resurfaced, and considerable brick sidewalk was laid in front and in the rear of the bath-house. The old roadway between Revere Street and the Point of Pines has also been kept in repair.

The summer was an especially favorable one for bathing, and the total number of bathers who used the bath-house was 170,993. This number was divided by sexes as follows: males, 108,264; females, 62,729. The largest number on any day was on June 30, when 7,995 used the bath-house. Permits were issued to about 2,900 residents of Revere to cross the reservation in bathing costume. There were 5,770 bicycles checked in the bicycle room. The number of employees varied from 61 to 90. The usual life patrol was maintained, and made 20 rescues during the season. In the emergency room 141 cases were treated, and no fatality or

serious accident occurred. The total receipts from the bath-house and bicycle room were \$38,272.65. The expenses were as follows:—

Pay rolls,	\$18,814 66
Bathing suits,	4,147 53
Stockings,	401 09
Towels,	510 50
Findings,	87 58
Coal,	656 29
Lighting,	1,671 14
Engine room and laundry,	288 39
Hardware,	180 40
Stationery,	16 75
Repairs,	44 78
Paint,	543 87
Tickets, etc.,	109 35
Medicines and attendance,	191 04
Lumber, etc.,	39 63
Supplies,	372 58
Boys' rooms,	959 21
Wells,	956 31
Shutters,	480 00
Stand-pipes and hose,	237 67
Furnishings,	204 06
Disinfectant,	78 86
Ice,	147 11
Uniforms,	32 55
Caps,	32 61
Sewing machine,	40 00
Electrical work,	48 85
Rubber rings,	41 13
Flags,	25 05
Brushes and combs,	21 00
Tide cards,	15 00
Clock,	5 50
Miscellaneous,	112 78
Total,	<hr/> \$31,513 27

The balance to the credit of the bath-house will be required for renewals, repairs and improvements. Work has already been begun in transforming the bicycle room into a general boys' bath-house. The room is fitted with benches, and each boy on receiving his bath suit will be assigned a locker, in which his clothing will be deposited during the bath. Instead of separate bath-houses, the room is divided by benches

for use in undressing and dressing. There are 500 lockers in the boys' bath-house, and it will result in giving considerable relief to the main bath-house on crowded days. Additions are also being made to the public sanitariums connected with the bath-house. The usual good order in the reservation has been maintained, and the crowds have been handled without serious accident. For the entire year there were 90 arrests, of which 36 were for drunkenness and the remainder for minor offences; and during the summer season 203 lost children were taken care of and returned to their parents or friends. The summer carnival arranged by the residents of Revere was held from August 16 to September 7. Various popular amusements, parades and water sports were carried on each week day on the reservation by permission and under the regulations and rules of the Commission. Very large numbers visited the reservation during these two weeks, and only three arrests were found necessary.

The finished portion of *Revere Beach Parkway* extends from Charles Eliot Circle to Winthrop Avenue, and, with the exception of additional planting, has required nothing but general care. A tool house has been built near the Chelsea and Revere town line, for use on the opening of the remainder of the parkway in the spring.

The roadway in the *Winthrop Shore Reservation* has several times been covered with sand and stones during heavy storms. No harm has been done to the roadway, but portions of the outer promenade have been badly washed. It will be economical to give this walk an asphalt or granolithic covering, which will prevent further damage. Additional steps to the beach have been built at the northern end of the reservation, and the iron fence along the promenade has been painted.

King's Beach and *Lynn Shore Reservations* have been administered together. A temporary fence has been built along the property line, and, although no other improvements have been made except to clear the beach of rubbish and fill a few cellar holes, the beach has been used by large numbers of people. As the beach was before the taking private property, this was at first a source of some annoyance to abutting owners. It therefore became necessary to

post the reservation and maintain a police patrol. The use of the beach by bathers who came considerable distances in bathing costume was considerably increased by the removal of the bath-houses from Nahant Beach.

The *Nahant* beaches were transferred to this Commission in November, 1900, and steps were immediately taken towards removal of the buildings at the Lynn end of the long beach in the early spring. The fact that many of these buildings were personal property of individuals led to some complications and delays, and it was the middle of July when all debris had been removed and the beach cleaned up. The Commission, by personal examination, satisfied itself that it was not desirable to retain the existing bath-houses or any of the other buildings even for use during last season. Their removal showed a condition of things that was unsanitary, and justified the course pursued. There is no question but what a large number of people felt the loss of the bathing facilities, insufficient as they have apparently been, and considerable numbers came in bathing costume from neighboring buildings. There is also an evident need for seats and benches, in addition to those provided by the city of Lynn in the adjoining Oceanside Park. The removal, however, of the group of buildings near the Lynn line which had been allowed to encroach upon the beach itself opened again the view along the curve of the beach, renewing the experience at Revere Beach, where the characteristic feature of shore scenery had also been for many years shut out by obstructing buildings. Although the highway across the beach is still under the jurisdiction of the town and its police, it was found necessary to police the beaches as well. The town and park police acted in co-operation with good results. Twenty-six arrests were made by the park police, nearly all of which were for statutory offences.

Nantasket Beach Reservation was used this year by a larger number of people than last year. The hotel and restaurant, roller coaster, merry-go-round, bathing and photograph privileges were leased for the summer, and were satisfactorily conducted under the rules and regulations of the Commission. All the buildings at the entrance to the steamboat wharf and railroad station except the block of



NANTASKET BEACH RESERVATION.—LABOR DAY.



three stores were taken down, and the premises cleared up and graded. A police station, which also includes the Superintendent's office, emergency room and men's sanitary, has been built at this point, and is in use. The strip of land between Nantasket Avenue and the railroad location will be used for administrative purposes. At the close of the summer season steps were taken towards carrying out contemplated improvements for the next season. The roller coaster will be located farther north, near the railroad crossing. It will be connected with the merry-go-round by a platform, and a similar walk has been constructed between the merry-go-round and the hotel piazzas. These piazzas and platforms will thus afford a public promenade or "board walk," 1,560 feet long, on the water side of all the buildings. The old bath-houses have been taken down, and plans are in preparation for a new bath-house, to be carried on by the Commission. It will probably be located on the beach to the south of the present buildings. Improvements have been made to the surface of Nantasket Avenue. It is desirable that curbing should be set along the edge of the sidewalks most used.

3. MISCELLANEOUS.

As a matter of convenience, there was printed as an Appendix to last year's report of this Commission the findings of the special commission appointed by the Supreme Judicial Court to apportion the expense of the Metropolitan reservations and parkways among the cities and towns of the Metropolitan Parks District and the Commonwealth. At that time the matter of the acceptance of their report was before the court, which subsequently recommitted the report to the special commission for further findings. The special commission thereupon filed a supplemental award, to which objections were filed by the town of Brookline. The whole matter was reserved for hearing by the full court, and is about to be heard at the date of this report. For convenience, the reservation and report are printed herewith as an Appendix.

By chapter 107 of the Resolves of the year 1901, the Metropolitan Park Commission was required to report to the Legislature of 1902 upon the desirability and feasibility

of constructing and maintaining a public bath-house and sanitary station upon that part of the Metropolitan reservations known as Nahant Beach. This report has been prepared by the Commission, and will be presented to the Legislature, as required by the resolve. For convenience of reference, it will also be printed as an Appendix to this report.

4. FINANCES.

The following tables show in brief form the expenditures under the various park loans for the year ending Dec. 1, 1901:—

METROPOLITAN PARKS LOAN.

Blue Hills Reservation:—		
Land,	\$1,230 00	
Miscellaneous,	6,371 42	
	<hr/>	\$7,601 42
Middlesex Fells Reservation:—		
Land,	\$2,367 00	
Miscellaneous,	2,974 33	
	<hr/>	5,341 33
Revere Beach Reservation:—		
Land,	\$21,982 92	
Miscellaneous,	13,738 59	
	<hr/>	35,721 51
Stony Brook Reservation:—		
Land,	\$1,192 50	
Miscellaneous,	339 62	
	<hr/>	1,532 12
Beaver Brook Reservation:—		
Miscellaneous,	\$121 10	
	<hr/>	121 10
Hemlock Gorge Reservation:—		
Miscellaneous,	\$172 07	
	<hr/>	172 ⁰⁷
Charles River Reservation:—		
Land,	\$79,731 38	
Miscellaneous,	26,278 07	
	<hr/>	106,009 45
Neponset River Reservation:—		
Land,	\$32,203 67	
Miscellaneous,	4,929 16	
	<hr/>	37,132 83
Mystic River Reservation:—		
Land,	\$50,145 72	
Miscellaneous,	3,982 52	
	<hr/>	54,128 24

Lynn Shore Reservation :—

Land,	\$6,200 00	
Miscellaneous,	772 09	
	<hr/>	\$6,972 09

Quincy Shore Reservation :—

Land,	\$13,429 00	
Miscellaneous,	498 08	
	<hr/>	13,927 08

Winthrop Shore Reservation :—

Land,	\$305 00	
Miscellaneous,	2,084 46	
	<hr/>	2,389 46

Hart's Hill Reservation :—

Land,	\$10,000 00	
Miscellaneous,	87 35	
	<hr/>	10,087 35

King's Beach Reservation :—

Land,	\$1,500 00	
Miscellaneous,	21 80	
	<hr/>	1,521 80

General expense,		6,604 83
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\$289,262 68

METROPOLITAN PARKS LOAN, SERIES II.

Blue Hills Parkway :—

Land,	\$16,200 00	
Miscellaneous,	10,789 71	
	<hr/>	\$26,989 71

Middlesex Fells Parkway :—

Land,	\$11,976 19	
Miscellaneous,	2,999 42	
	<hr/>	14,985 61

Mystic Valley Parkway :—

Land,	\$15,195 00	
Miscellaneous,	11,095 63	
	<hr/>	26,290 63

Revere Beach Parkway :—

Land,	\$101,169 68	
Miscellaneous,	138,544 78	
	<hr/>	239,714 46

Neponset River Parkway :—

Land,	\$6,575 41	
Miscellaneous,	648 54	
	<hr/>	7,223 95

Fresh Pond Parkway :—

Land,	\$12,000 00	
Miscellaneous,	888 40	
	<hr/>	12,888 40

Furnace Brook Parkway:—		
Land,	\$42,704 39	
Miscellaneous,	4,294 35	
	<hr/>	\$46,988 74
Nahant Beach Parkway:—		
Miscellaneous,	\$1,170 78	
	<hr/>	1,170 78
Charles River Speedway:—		
Miscellaneous,	\$315 78	
	<hr/>	315 78
Blue Hills Roads:—		
Miscellaneous,	\$408 00	
	<hr/>	408 00
Middlesex Fells Roads:—		
Miscellaneous,	\$13,224 97	
	<hr/>	13,224 97
Lynnway:—		
Miscellaneous,	\$15 61	
	<hr/>	15 61
Middlesex Fells and Lynn Woods:—		
Miscellaneous,	\$50 75	
	<hr/>	50 75
General expense,		4,717 18
		<hr/>
		\$394,984 57
NANTASKET BEACH LOAN.		
Land,	\$136,624 19	
Miscellaneous,	21,795 47	
	<hr/>	\$158,419 66

The following tables show the total amount expended in each loan and the cost of each reservation and parkway to Dec. 1, 1901, and the amounts charged by the Auditor's department to meet the sinking fund and interest requirements to Jan. 1, 1900:—

METROPOLITAN PARKS LOAN.

Blue Hills Reservation:—		
Land,	\$357,847 79	
Miscellaneous,	241,457 32	
	<hr/>	\$599,305 11
Middlesex Fells Reservation:—		
Land,	\$681,998 98	
Miscellaneous,	207,503 01	
	<hr/>	889,501 99
Revere Beach Reservation:—		
Land,	\$1,139,761 21	
Miscellaneous,	577,794 21	
	<hr/>	1,717,555 42

Stony Brook Reservation :—		
Land,	\$280,281 37	
Miscellaneous,	74,345 22	
	<hr/>	\$354,626 59
Beaver Brook Reservation :—		
Land,	\$29,819 29	
Miscellaneous,	19,782 95	
	<hr/>	49,602 24
Hemlock Gorge Reservation :—		
Land,	\$53,254 00	
Miscellaneous,	14,573 40	
	<hr/>	67,827 40
Charles River Reservation :—		
Land,	\$1,299,546 54	
Miscellaneous,	138,317 59	
	<hr/>	1,437,864 13
Neponset River Reservation :—		
Land,	\$125,369 36	
Miscellaneous,	28,533 77	
	<hr/>	153,903 13
Mystic River Reservation :—		
Land,	\$117,074 22	
Miscellaneous,	14,587 96	
	<hr/>	131,662 18
Lynn Shore Reservation :—		
Land,	\$86,391 40	
Miscellaneous,	1,496 91	
	<hr/>	87,888 31
Quincy Shore Reservation :—		
Land,	\$44,448 00	
Miscellaneous,	5,105 00	
	<hr/>	49,553 00
Winthrop Shore Reservation :—		
Land,	\$20,309 00	
Miscellaneous,	158,955 12	
	<hr/>	179,264 12
Hart's Hill Reservation :—		
Land,	\$10,000 00	
Miscellaneous,	103 95	
	<hr/>	10,103 95
King's Beach Reservation :—		
Land,	\$23,847 21	
Miscellaneous,	1,180 93	
	<hr/>	25,028 14
West Roxbury Parkway :—		
Land,	\$244,976 01	
Miscellaneous,	8,313 67	
	<hr/>	253,289 68
General expense,		127,458 93
		<hr/>
		\$6,134,434 32

Sinking fund requirement to 1896,	\$18,980 18	
Care and maintenance to July 1, 1896,	85,813 46	
Care and maintenance July 1, 1896, to Jan. 1, 1897,	19,604 06	
Sinking fund assessment for 1897,	63,630 70	
Sinking fund assessment for 1898,	9,755 55	
Sinking fund assessment for 1899,	64,224 00	
Interest,	23,318 61	
	<hr/>	\$290,326 56
Total charged to Dec. 1, 1901,		\$6,424,760 88

METROPOLITAN PARKS LOAN, SERIES II.

Blue Hills Parkway :—		
Land,	\$132,892 02	
Miscellaneous,	148,362 00	
	<hr/>	\$281,254 02
Middlesex Fells Parkway :—		
Land,	\$205,745 39	
Miscellaneous,	434,363 12	
	<hr/>	640,108 51
Mystic Valley Parkway :—		
Land,	\$170,764 20	
Miscellaneous,	202,310 90	
	<hr/>	373,075 10
Revere Beach Parkway :—		
Land,	\$283,689 23	
Miscellaneous,	405,277 30	
	<hr/>	688,966 53
Neponset River Parkway :—		
Land,	\$31,154 26	
Miscellaneous,	5,293 48	
	<hr/>	36,447 74
Fresh Pond Parkway :—		
Land,	\$35,053 21	
Miscellaneous,	21,733 62	
	<hr/>	56,786 83
Furnace Brook Parkway :—		
Land,	\$43,748 39	
Miscellaneous,	5,914 37	
	<hr/>	49,662 76
Nahant Beach Parkway :—		
Miscellaneous,	\$1,170 78	
	<hr/>	1,170 78
Charles River Speedway :—		
Miscellaneous,	\$472,894 77	
	<hr/>	472,894 77
Blue Hills Roads :—		
Miscellaneous,	\$6,122 41	
	<hr/>	6,122 41

Middlesex Fells Roads:—

Miscellaneous,	\$45,033 41	
	<hr/>	\$45,033 41

Stony Brook Roads:—

Miscellaneous,	\$37,183 45	
	<hr/>	37,183 45

Lynnway:—

Land,	\$20,500 00	
Miscellaneous,	88 87	
	<hr/>	20,588 87

Middlesex Fells and Lynn Woods:—

Miscellaneous,	\$4,682 27	
	<hr/>	4,682 27

General expense,		75,154 72
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	<hr/>	\$2,789,132 17
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Sinking fund requirement for 1896,	\$3,650 03	
Sinking fund assessment for 1897,	14,057 10	
Sinking fund assessment for 1898,	3,765 08	
Sinking fund assessment for 1899,	15,396 00	
One-half interest,	22,327 68	
	<hr/>	59,195 89

Total charged to Dec. 1, 1901,		\$2,848,328 06
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NANTASKET BEACH LOAN.

Land,	\$572,313 02	
Miscellaneous,	52,182 10	
	<hr/>	

Total charged to Dec. 1, 1901,		\$624,495 12
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The appropriations heretofore made are as follows:—

METROPOLITAN PARKS LOAN.

Original appropriation, chapter 407, Acts of 1893,	\$1,000,000 00
First Revere Beach Act, chapter 483, Acts of 1894,	500,000 00
Charles River Act, chapter 509, Acts of 1894,	300,000 00
Second Revere Beach Act, chapter 305, Acts of 1895,	500,000 00
General appropriation, chapter 466, Acts of 1896,	1,000,000 00
General appropriation, chapter 464, Acts of 1897,	500,000 00
General appropriation, chapter 530, Acts of 1898,	1,000,000 00
Revere Beach Bath-house Act, chapter 142, Acts of 1899,	125,000 00
General appropriation, chapter 396, Acts of 1899,	300,000 00
Charles River Improvement Act, chapter 465, Acts of 1900,	50,000 00
Fuller's Wharf Act, chapter 467, Acts of 1900,	30,000 00
General appropriation, chapter 445, Acts of 1901,	450,000 00
Mystic River Bridge Act, chapter 492, Acts of 1901,	200,000 00
	<hr/>
	\$5,955,000 00

To provide for interest and sinking fund requirements to 1900, chapter 311, Acts of 1897,	\$900,000 00
Total amount of loans,	\$6,855,000 00
Amounts received from sales of buildings, receipts from bath-house, fines, etc.,	198,334 01
Total,	\$7,053,334 01
Total of amounts charged to loans,	6,424,760 88
Balance remaining in hands of State Treasurer,	\$628,573 13

METROPOLITAN PARKS LOAN, SERIES II.

Original boulevard, chapter 288, Acts of 1894,	\$500,000 00
General appropriation, chapter 472, Acts of 1896,	500,000 00
General appropriation, chapter 521, Acts of 1897,	1,000,000 00
Saugus Bridge Acts, chapter 547, Acts of 1898,	100,000 00
General appropriation, chapter 428, Acts of 1899,	500,000 00
Mattapan Bridge Act, chapter 443, Acts of 1900,	75,000 00
Winchester Act, chapter 444, Acts of 1900,	50,000 00
Revere Beach Parkway Act, chapter 445, Acts of 1900,	200,000 00
	\$2,925,000 00
To provide for interest and sinking fund requirements to 1900, chapter 311, Acts of 1897,	100,000 00
Total amount of loans,	\$3,025,000 00
Receipts from sales, etc.,	29,907 41
Total,	\$3,054,907 41
Amounts charged to loans,	2,848,328 06
Balance remaining in hands of State Treasurer,	\$206,579 35

NANTASKET BEACH LOAN.

Appropriation, chapter 464, Acts of 1899,	\$600,000 00
Appropriation, chapter 456, Acts of 1901,	100,000 00
	\$700,000 00
Receipts from rents, etc.,	5,881 50
Total,	\$705,881 50
Amounts charged to loans,	624,495 12
Balance remaining in hands of State Treasurer,	\$81,386 38

Respectfully submitted,

JOHN WOODBURY,

Secretary.

LANDSCAPE ARCHITECTS' REPORT.

Hon. WILLIAM B. DE LAS CASAS,

Chairman, Metropolitan Park Commission.

DEAR SIR:— We beg to submit the following report for the year ending Nov. 30, 1901:—

FOREST RESERVATIONS.

Partly on account of the petitions for street railway locations through the Blue Hills Reservation, touched upon in our last annual report, we were called upon to prepare preliminary plans for a system of future main roads in the western portion of the reservation, in order that any decision, whether positive or negative, that the Commission might be called upon to make in respect to railway locations along the borders of the reservation or elsewhere, might not interfere with probable future developments. The lines for about fourteen and one-half miles of main road were studied out with the assistance of the topographical map and by examination of the ground. These lines as studied, without substantial alteration, would provide adequately for passage through the eighteen hundred acres forming this part of the reservation and for rendering its most interesting points accessible; and this plan has already served its immediate purpose of helping to fix the proper location for tracks, whenever such location shall be granted, near the present western entrance of the reservation. But we have still to determine, by a more detailed survey and study, the precise lines and grades of these future roads, with a view to fixing them on the ground by permanent marks, so that the temporary paths and roads needed in the administration of the area and its gradual development may be made to follow as nearly as possible the permanent lines.

At the Stony Brook Reservation we have begun prelim-

inary studies for a system for the conservative improvement and maintenance of the woods.

At the Middlesex Fells Reservation we have made similar studies in regard to the areas near Bear Hill and the Chandler Farm, and have guided the Superintendent in the delicate work of clearing some of the lands which have been growing up to a poor and scrubby sprout growth since the acquirement of the reservation. The project, which the Commission has under consideration, to pasture sheep on these lands for their permanent maintenance in grass, is a very wise one, as the fields will form a most agreeable contrast to the surrounding forest, and will be valuable for athletic sports.

RIVER RESERVATIONS.

For the Charles River Reservation we have planned a canoe runway and the necessary landings and takings at Newton Lower Falls, and in connection with Messrs. Hartwell, Richardson & Driver a public-boat house, proposed to be erected on the reservation at Moody Street, Waltham, by the proprietor of a former boat house at this point. We have directed the dredging of a shallow cove near the Auburndale Bridge, materially improving the boating conditions there; have consulted with the managers of the Riverside Recreation Grounds as to their improvements affecting the river and as to rearrangements of boundary and rights of way; and have made plans for an abandonment to the Waltham Canoe Club, to provide for an addition to their building. For the section between Galen Street and North Beacon Street, Watertown, a distance of one mile, we have made complete grading plans for a driveway and walk, and these plans are now being carried out under the direction of the Engineering Department. For the space between the driveway and the shore additional grading plans are now in course of preparation.

In consultation with the Engineer, we advised as to the work of constructing a trunk sewer of the city of Newton through the Hemlock Gorge Reservation. It was possible so to contrive the work as to do no serious damage to the picturesque landscape of this locality.

In connection with the Neponset River Reservation, the only matters calling for our attention during the year were an abandonment of land to the New York, New Haven & Hartford Railroad, to avoid undue interference with their projected improvements, and a proposed extension of Water Street, Hyde Park, across the river through the reservation to Milton Street. In regard to both of these objects we prepared plans after conference with those interested, and in the case of the latter made several alternative plans.

For the Mystic River Reservation we have prepared for the Engineer, as a basis for his estimates of construction, preliminary plans with grades, showing the principal constructive features that will be required in the improvement of the reservation.

BEACH RESERVATIONS.

Mainly as a basis for the guidance of the Commission in the work of needful temporary repairs and improvements at Nantasket Beach, we have made studies for a general plan for its ultimate improvement, and are proceeding to the completion of such a plan. Using these studies as a guide, we have advised the Commission and its architects, Messrs. Stickney & Austin, as to the location, grade and character of several small buildings, and as to the temporary improvement of their surroundings.

In pursuance of the act of Legislature calling upon the Commission for a report on a bath-house for Nahant Beach, we were called upon to consult with Messrs. Stickney & Austin in the preparation of a plan. We have submitted a preliminary plan for the location, approaches, surroundings and grades for such an establishment as seemed fitted to the probable needs of the locality, and the architects are now preparing the plans for the building.

PARKWAYS.

A revision of our previous plan for Balster Brook Parkway from Paul's Bridge to the Blue Hills was made in order to reduce the cost as to portions and to conform the lines to the wishes of those who had proposed to give land for the

connection; and we took advantage of the opportunity to restudy and improve the design in other respects.

The construction of the Metropolitan Sewer through a portion of Furnace Brook Parkway called for advice from us as to its location and grade. A plan was made for an abandonment at Eaton's Pond, and new alternative plans were prepared for taking lines for the parkway east of Hancock Street and near Merrymount Park, Quincy.

The construction of Mattapan Bridge on the Blue Hill Parkway has called for some supervision by us, in order to insure a proper adjustment between the surroundings and the bridge; and the plans for the southern part of the same parkway were restudied in connection with the road plan for the Blue Hills Reservation.

On Fresh Pond Parkway, Mystic Valley Parkway and Revere Beach Parkway a considerable number of minor matters have required our attention during the year, in connection with maintenance, construction and planting.

As to the proposed new bridge across the Mystic River on the Middlesex Fells Parkway, we have been in consultation with the Engineer, and have prepared plans for the location of the bridge and the revision of the adjacent portions of the parkway and its junction with the Revere Beach Parkway and the Mystic River Reservation.

To sum up statistically, we have prepared during the year 54 studies, 36 preliminary general plans, 44 construction plans and sections, 8 architectural or engineering details and 17 planting plans, and have submitted 55 written reports.

Respectfully submitted,

OLMSTED BROTHERS.

DEC. 1, 1901.

ENGINEER'S REPORT.

HON. WILLIAM B. DE LAS CASAS,

Chairman, Metropolitan Park Commission.

SIR:—I herewith present my seventh annual report, enumerating the work of the Engineering Department for the year ending Nov. 1, 1901.

The force employed has been reduced at times during the year, following closely the requirements made upon the department. The number at the beginning of the year was 33, and at the end 22; average for the entire year, 30. The different classes of work have been in charge of the following division engineers:—

Construction,	JOHN R. RABLIN.
Surveying,	DAVID A. AMBROSE.
Drafting,	LOUIS V. FOSTER.

The total cost of conducting the department has been as follows:—

Services,	\$25,845 88
Equipment,	98 52
Operating expenses,	1,847 36
Total,	\$27,791 76

Construction and maintenance work, done under the supervision of the department, has amounted to \$182,742.91.

An appraisal of the property in charge of the department, omitting the value of maps, plans, notes and records, is as follows:—

Equipment:—	
Offices,	\$2,121 00
Surveying and drawing instruments,	2,930 00
Miscellaneous,	65 00
	\$5,116 00
Supplies:—	
General,	1,257 00
Total,	\$6,373 00

There has been received during the year \$139 from the sale and rent of surveying instruments, and repairs have amounted to \$123.

Details are given in the following parkway and reservation sections, and in the tables appended: —

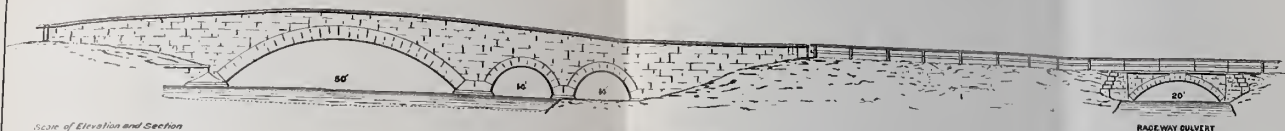
PARKWAYS.

Balster Brook. — This parkway has been suggested as an alternative route for the Neponset River Parkway from Paul's Bridge to the Blue Hills Reservation. Additional topographical surveys have been made in connection with the studies of the Landscape Architects.

Blue Hills Parkway. — Preliminary arrangements for the new bridge across the Neponset River at Mattapan Square were completed early in the summer. These comprised the adoption of plans and completion of terms with the city of Boston, the New York, New Haven & Hartford Railroad Company and private owners, relative to takings in Mattapan Square and of lands for changes in the Mattapan railroad station grounds. The plans adopted provide for the extension of the parkway, of the full width of 130 feet, northerly, towards Boston, across the raceway to the proposed bridge. The total length of the bridge and curving wing walls will be 175 feet, with a clear width of 80 feet over the arches. There will be three arches for the river, one of 50-foot span and two of 14-foot span each. The raceway will be carried across the parkway through a culvert with an arch of 20-foot span. The entire masonry construction will be of concrete faced with granite, the arches reinforced with arched steel ribs on the system known as Melan construction. A circular drain, $6\frac{1}{2}$ feet in diameter, built by the city of Boston, will have an outlet through the northerly abutment. The increase in area of opening over that of the present bridge will be 40 per cent., or, by excavating under the 14-foot relief arch, 53 per cent. The present bridge has a clear roadway of 22 feet; the new one will have 56 feet. The present walks are each $6\frac{1}{2}$ feet; the new ones, 12 feet.

Proposals for construction were received May 13, 1901,

BLUE HILLS PARKWAY – PROPOSED MATTAPAN BRIDGE

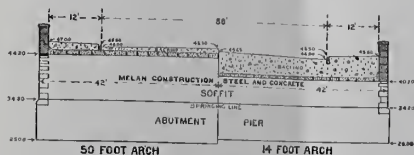


West Elevation

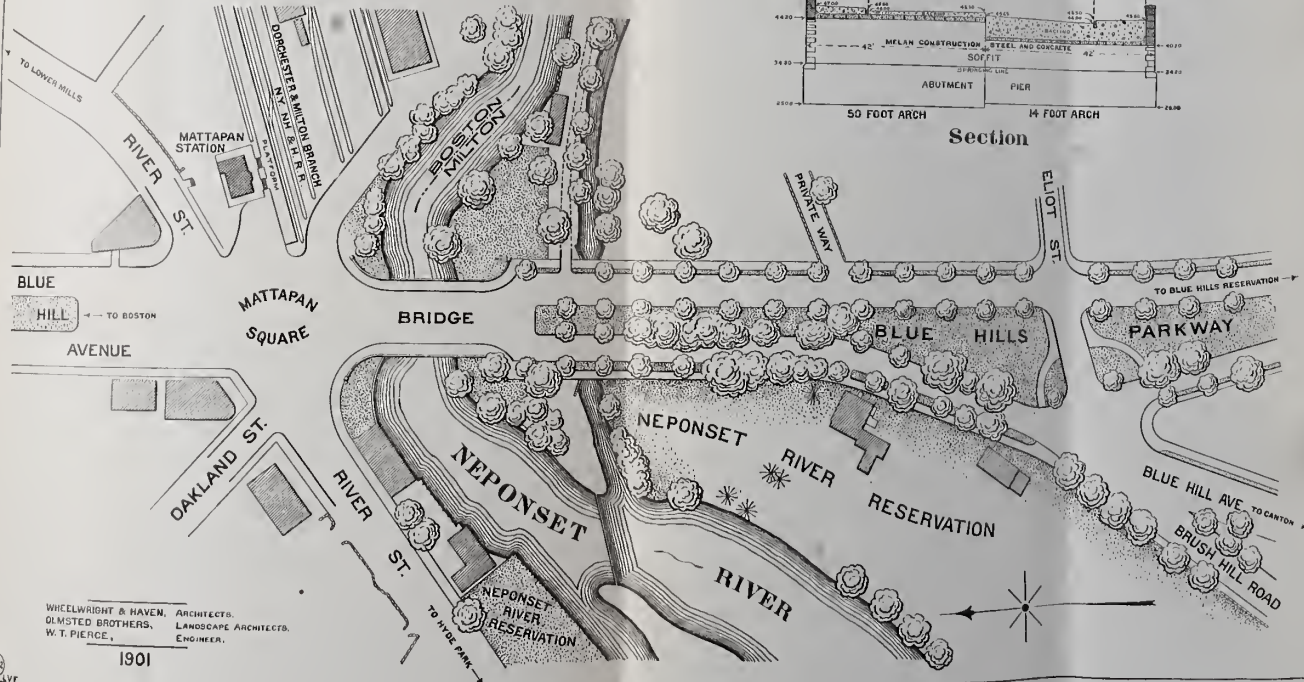
Scale of Elevation and Section

Scale of Plan

1" = 10' 0" 20' 0" 30' 0" 40' 0" 50' 0" 60' 0" 70' 0" 80' 0" 90' 0" 100' 0"



Section



WHEELWRIGHT & HAVEN, ARCHITECTS.
 OLMSTED BROTHERS, LANDSCAPE ARCHITECTS.
 W. T. PIERCE, ENGINEER.

1901

PK

on specifications for the Melan system, but allowing the submission of proposals on other systems, from the following:—

Melan system:—	
National Contracting Company, New York,	\$52,505 00
Patrick McGovern, Boston,	47,744 50
Taylor, Carr & Andrews, Boston,	46,576 40
O'Hern & Berrigan, Rumford Falls, Me.,	44,300 00
Thacher system:—	
O'Hern & Berrigan, Rumford Falls, Me.,	45,900 00
Ransome system:—	
Patrick McGovern, Boston,	45,494 50

The contract, No. 53, was awarded, June 12, to O'Hern & Berrigan for the Melan system. Work began July 17, 1901, and will be completed early in the summer of 1902. The contract was transferred by the contractors, with the consent of the Commission, Sept. 18, 1901, to H. A. Hanscom Company of Boston. The total estimated cost, according to vouchers of this department, to Nov. 1, 1901, has been as follows:—

Construction, including royalty,	\$6,458 60
Incidental expenses,	71 05
Engineering and inspection,	1,066 55
Total,	<u>\$7,596 20</u>

Repairs, costing \$388.50, were made to the old bridge across the Neponset River before its care and maintenance were transferred to the contractors. The New York, New Haven & Hartford Railroad Company began July 9, 1901, on the new station grounds.

The Metropolitan Water and Sewerage Board has built a sewer across the parkway at Brook Road under a satisfactory arrangement with the Commission. Construction plans are being made from Canton Avenue to the Harland Street Entrance of the Blue Hills Reservation.

Fresh Pond.—A brick walk has been laid on Brattle Street, crossing the parkway. A short length of drain has been built to conduct water away from a spring. After the winter some repairs were made to the roadway surface, the contractor for the parkway, by agreement, doing part of the work.

Furnace Brook. — A taking plan has been made for an extension from Newport Avenue to Hancock Street, and construction plans completed. A topographical survey has been made for studies between Hancock Street and the Quincy Shore Reservation.

The line of the high-level sewer has been designed by the Metropolitan Water and Sewerage Board to be built in a portion of the section between Newport Avenue and Adams Street, for a distance of 2,400 feet. The location and manner of doing the work have been approved. The surplus from the trench is to be placed on location of proposed parkway drive.

Middlesex Fells Parkway. — Drainage improvements were made in March, 1901, on Fellsway West, at the corner of Fulton Street, Medford. An entrance to Fellsway East for a street on the Dexter estate, Malden, was made between April 15 and April 30, 1901. Incidental to this work were some changes in drains, made necessary to remove an outlet from private land. The total cost, including engineering, inspection and incidental expenses, was \$731.31.

Plans are being prepared for a new pile bridge, to connect the Somerville and Medford sections of Fellsway, and to replace the old Wellington Bridge.

In October of this year the bridge over the Medford Branch Railroad was resheathed with 3-inch kyanized spruce under direction of the Superintendent.

Mystic Valley. — The work of grading Manchester Field, in Winchester, noted in my last report as begun Oct. 18, 1900, was continued, under contract No. 52, until Dec. 15, 1900; was resumed May 25, 1901, by day work, under direction of the Superintendent, and finished July 15, 1901. The total cost to date, omitting labor under direction of the Superintendent, but including, in item for engineering, cost of all services rendered by this department, has been as follows:—

Labor and tools, Contract No. 52,	\$6,042 30
Furnishing of loam,	5,726 78
Incidentals,	115 36
Engineering and inspection,	734 80
Total,	<u>\$12,619 24</u>

Proposals were received Oct. 3, 1901, for building a wooden foot bridge, 140 feet long and 8 feet wide, across the Aberjona River and an island at the southerly end of Manchester Field. The lowest proposition, that of J. J. Flynn, for \$1,190, was accepted. This work is in progress, and is to be finished this year. Changes in gutter and edge-stone at the corner of the northern extension of the parkway and Walnut Street were finished Nov. 23, 1900, at a cost of \$70.70. The town of Winchester has constructed a sewer, between Lloyd Street and Cutting Street, under a license from the Commission.

Nahant Beach.—A topographical survey of this parkway, including levels on beaches, has been made over an area of 202 acres.

Revere Beach Parkway.—This parkway is well advanced towards completion for a distance of 4.17 miles, from the Charles Eliot Circle, of the Revere Beach Reservation, across Revere and Chelsea, to Main Street, Everett, except for about 1,000 feet at the crossing of the Eastern Division of the Boston & Maine Railroad at the Revere station. This crossing of the railroad is to be made in connection with the elimination of the grade crossing of Winthrop Avenue. The work is expected to be done in 1902.

Proposals were received April 22, 1901, for surfacing and other work, from Mill Street to Washington Avenue, and from Everett Avenue to Main Street, from the following:—

National Contracting Company, New York, . . .	\$240,210 25
Jones & Meehan, Boston,	179,074 25
The C. H. Eglee Company, Boston,	157,485 40
Patrick McGovern, Boston,	116,987 10
A. J. Wellington, Boston,	114,706 50
Coleman Brothers, Charlestown,	113,106 50

The contract, No. 54, was awarded to Coleman Brothers. Work began April 30, 1901, and is still in progress. To this contract has been added the construction of the portion between Washington Avenue and Everett Avenue, making the aggregate bid \$124,849. The estimated value of work performed under this contract to Nov. 1, 1901, was \$105,454.55.

Proposals were received May 20, 1901, for building from the junction of the parkway with Winthrop Avenue to Mill Street, from the following, omitting the crossing of the railroad at Revere station : —

Patrick McGovern, Boston,	\$55,785 75
A. J. Wellington, Boston,	54,433 75
The C. H. Eglee Company, Boston,	52,351 75
Rowe & Hall, Boston,	51,707 50
Richard Falvey, Somerville,	48,985 25
John H. McCusker, Waltham,	44,687 25
Coleman Brothers, Charlestown,	44,022 00
McCarthy & Gill, Somerville,	41,973 00

This contract, No. 55, was awarded to McCarthy & Gill. Work began June 3, 1901, and is still in progress. The estimated value of work performed under this contract to Nov. 1, 1901, was \$31,324.02.

These two contracts will be completed early in the spring of 1902. The total cost of construction and maintenance on the whole parkway, according to vouchers of this department, has been as follows : —

Previously reported :—	
Construction,	\$239,568 51
Engineering and inspection,	12,467 53
	\$252,036 04
Year ending Nov. 1, 1901 :—	
Construction,	\$139,325 39
Incidentals,	321 51
Engineering and inspection,	4,581 99
	144,228 89
Total,	\$396,264 93

The crossing of Everett Avenue by the parkway necessitates the raising of the grade of the street 4 feet in Chelsea and Everett. An arrangement has been made for this work to be done by the two cities, and paid for from the funds for the parkway. The city of Everett has built a large drain in the parkway, between Second Street and Everett Avenue, with an outlet into tidal water. A portion of the cost of this drain is to be paid for from the parkway appropriation, as it provides for parkway drainage for a distance of 5,000

feet from County Road to Gladstone Street. The Metropolitan Water and Sewerage Board has constructed a sewer crossing the parkway in Chelsea near the Revere boundary. The Revere Water Company, under license from the Commission, has laid a 6-inch water main for a distance of 715 feet, between Pratt's Court and Stowers Street. The city of Chelsea has laid water pipes and sewers in the parkway, between Bassett Street and Orange Street. A system of sewers, prepared by the city engineer, for that portion of parkway under construction in Everett, has been approved, and in conformity therewith the city has built a sewer on the northerly side from Spring Street to Ferry Street.

Three proposals were received Oct. 25, 1901, for reflooring the Beachmont Bridge, over the Boston, Revere Beach & Lynn Railroad; and the lowest, that of Joseph Ross, \$655.20, was accepted. This work has been finished, and consisted in replacing the two courses of oak planking with hard-pine plank in the deck, and spruce in the sheathing, course.

The completion of construction plans from Main Street, Everett, to Middlesex Fells Parkway and the Mystic River Reservation, Medford, a distance of about a mile, await the adoption of details of laying out.

RESERVATIONS.

Beaver Brook.—Trapelo Road in Waltham has been built to its full width of $49\frac{1}{2}$ feet by the Concord & Boston Street Railway Company, under the conditions of their franchise from the city. A retaining wall has been built along the reservation and tracks laid close to the northerly line of the street, and the railway is in operation down to the Belmont town line.

Blue Hills Reservation.—A topographical survey has been made of 85 acres in the Henry L. Pierce devise, leaving about 615 acres still to be surveyed. Construction plans are being prepared for the Harland Street Entrance, as an extension of the Blue Hills Parkway. The main drive in this entrance, from the terminus of the parkway, will be .72 of a mile long, and the boundary road on the westerly side .81 of a mile long.

Charles River.—The boundary road from Washington Street, Newton Lower Falls, to Boylston Street and Hemlock Gorge Reservation, Newton Upper Falls, has been finished by Walter Chesley under Contract No. 51. The cost, including engineering and inspection, was \$2,488.08. This is a narrow road of the simplest construction, is 1.78 miles long, and forms a ready means of access to this section and a valuable connection between Newton Lower Falls and Newton Upper Falls and the Hemlock Gorge Reservation.

Proposals were received July 15, 1901, for building the Charles River Road in Watertown, from North Beacon Street to Riverside Street, ranging from \$56,748.70 to \$100,082.50. The amount available for construction being insufficient, according to the canvass, all bids were rejected. The principal item of cost was the large expense of obtaining filling material by the proposed plans for dredging and improving the bed of the river. A modification of the plans resulted in the submission to the Commission of the following proposals, Aug. 7, 1901:—

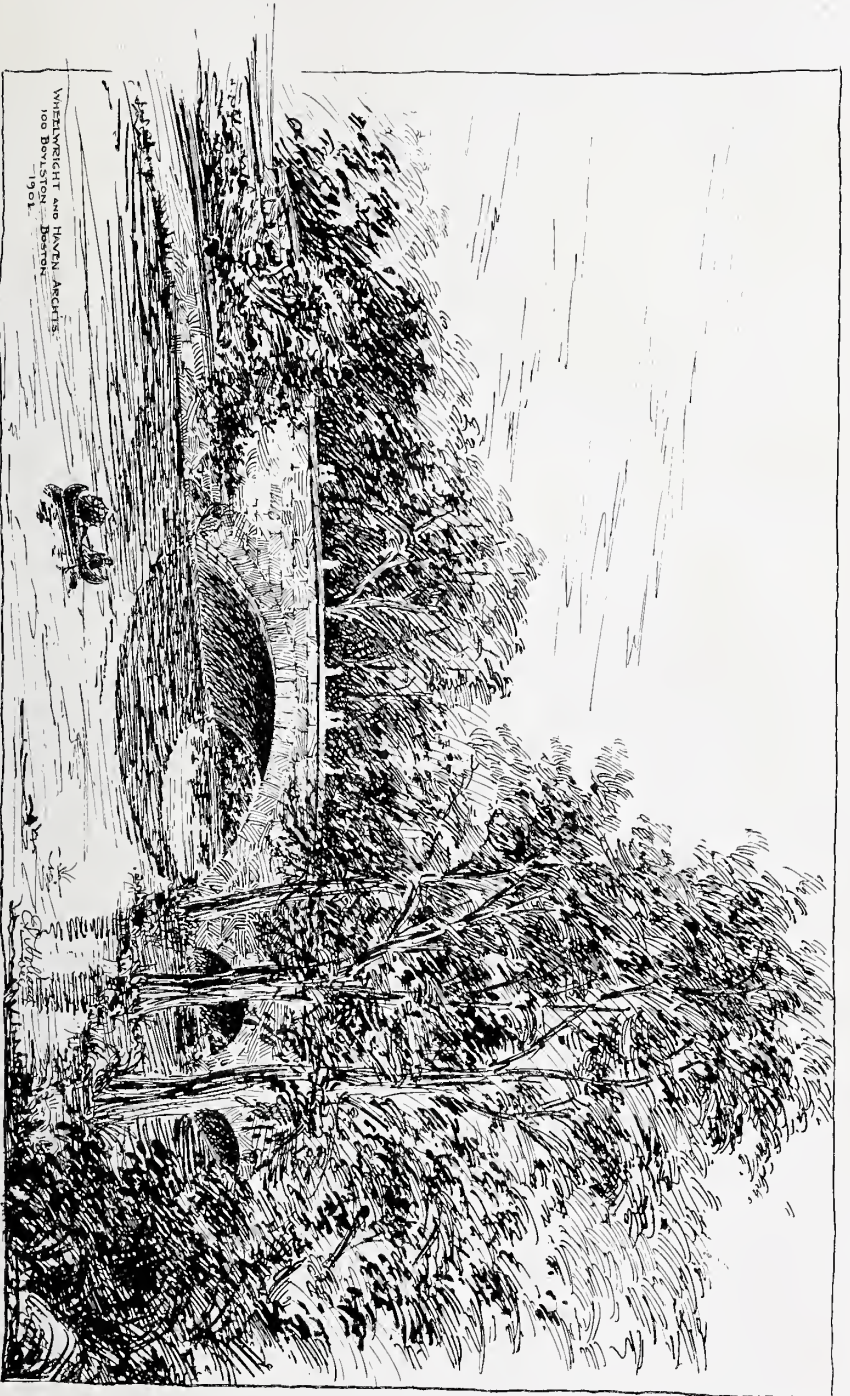
Nawn & Brock, Boston,	\$55,571 50
T. Stuart & Son, Newton,	50,747 40
Jeremiah Sullivan, Cambridge,	49,633 40
Coleman Brothers, Charlestown,	49,249 50

The contract, No. 56-A, was awarded to Coleman Brothers, with reservations allowing such modifications as will keep the total cost within the limits of the appropriation. The work began Aug. 17, 1901, and is still in progress. The length of the road will be .97 of a mile.

The total estimated value of work done under this contract to Nov. 1, 1901, has been as follows:—

Construction,	\$11,634 00
Incidentals,	60 25
Engineering and inspection,	427 15
Total,	<u>\$12,121 40</u>

The city of Boston is constructing an extension of Brooks Street across the Charles River Reservation from Faneuil station to North Beacon Street. This is on a right of way



WHEELWRIGHT AND HAVEN ARCHTS.
108 BOSTON ST. BOSTON.
1901.

BLUE HILLS PARKWAY.—MATTAPAN BRIDGE.

granted the city by the Commission, with certain stipulations as to manner of construction. The marsh area between Brooks Street, Boston & Albany Railroad and North Beacon Street has been partially regraded with surplus earth from the street work, at a small expense for the spreading.

A topographical survey, over an area of 150 acres, has been made of the sections of the reservation along the lower portions of the river shores. Plans have been made for a proposed canoe-way at Cordingly Mills, Newton Lower Falls. Loam left over from the construction of Fresh Pond Parkway, to the amount of 1,365 cubic yards and at an expense of \$556.25, has been carted to the Speedway.

Hemlock Gorge.—A sewer is being built by the city of Newton through this reservation, from Boylston Street to Elliot Street, as an extension of the city's system. This work is being done under a permit from the Commission, and, although the sewer extends the entire length of the reservation, the work is being carefully done without marring any of the natural beauties of the region.

Lynn Shore.—Some slight repairs have been made to the wooden bulkheads protecting the shore; but they are nearly all past repairing, and broken away, and the ocean is making serious inroads into the high bank which extends the entire length of the reservation. Construction plans for the treatment of this shore front have been prepared.

Middlesex Fells Reservation.—The boundary road leading to the reservation from Winthrop Street, Medford, along the easterly side of the Whitmore Brook Entrance, was finished, under contract No. 50-A, June 30, 1901. This road is .81 of a mile long, 20 feet in width, and finished with a gravel surface. Its comparatively large cost has been due to the nature of the country in which it has been built. The total cost of construction, according to vouchers of this department, has been as follows:—

Construction,	\$10,147 17
Incidentals,	134 97
Engineering and inspection,	2,170 57
	<hr/>
Total,	\$12,452 71

The reservoir on Bear Hill, with connecting pipe lines, has been under construction by the Metropolitan Water and Sewerage Board.

Nantasket Beach. — Lines and grades have been given at various times for some grading and building improvements.

Neponset River Reservation. — The entrance to Edgewater Drive, from River Street, near Mattapan Square, has been roughly graded across reservation land by private parties, under permit from the Commission.

Quincy Shore. — Preliminary steps have been taken towards arranging for a plan of a proposed bridge over the railroad at Atlantic Street in Quincy.

Revere Beach Reservation. — A topographical survey has been made of the shore between Revere Beach and Winthrop Beach, over an area of 141 acres. This survey has been made in such manner that changes in the conformation of the shore and beaches can be determined.

Winthrop Shore. — The winter storms have several times washed sand and gravel on to portions of the Winthrop Shore Drive, but without injury to the roadway surfacing. The surfacing material has been washed out on portions of the promenade. It would be advisable to have the promenade surfaced with a material which will resist the wash and protect the backing of the sea wall.

Wooden steps, with landing placed on iron brackets, have been built down to the beach from the high wall near the bridge over the railroad. These were completed June 18, 1901, and cost \$137. The fence on sea wall is especially subject to rusting, and in October, 1901, was given two coats of paint, under direction of the Superintendent. An entrance to the drive has been built by the town for Forrest Street.

Adjoining the southerly end of Winthrop Shore Reservation is Great Head, a high cliff, 95 feet above mean high water and composed of coarse drift. This department made a topographical survey of this headland in 1900. The second report of United States Commissioners on the condition of Boston harbor, made in 1860, mentions that the upper edge of this bluff seems to have been washed away 65 feet

since the survey of 1847. Comparing the survey made for this report of 1860 and our survey of 1900, we find there has been a further wearing away of 50 feet.

GENERAL.

Topographical surveys have been made during the year of 660 acres. The total area represented by taking plans and plans of conveyance to the Park System, irrespective of action taken thereon by the Commission, is 40 acres; and by abandonment plans, 36 acres. Boundaries have been permanently marked by 234 stone bounds, iron bolts and drill holes in ledges. Engineering and inspection incidental to actual construction and maintenance, omitting travelling and other incidental expenses, has averaged 5.35 per cent.

The following tables are appended to this report: —

Table 1. Lengths of parkways.

Table 2. Summary of plan work.

Table 3. Summary of vouchers.

Table 4. Summary of cost of engineering.

Table 5. Prices for items of construction.

Respectfully submitted,

WM. T. PIERCE,

Engineer.

DEC. 1, 1901.

TABLE 1. — *Length of Parkways, corrected to Dec. 1, 1901.*

DESCRIPTION.	Construc- tion completed (Miles).	Under Con- struction (Miles).	Remainder (Miles).	Totals (Miles).
Blue Hills: Mattapan Square to Harland Street Entrance of Blue Hills Reservation, Boston and Milton,	1.47	.08	.73	2.28
Fresh Pond: Mount Auburn Street to Huron Avenue, Cambridge, .	.52	-	-	.52
Furnace Brook: Hancock Street to Blue Hills Reservation, Quincy, .	-	-	2.54	2.54
Lynnway: Revere Beach Reserva- tion to northerly side of Saugus River, Revere and Lynn, . . .	-	-	.69	.69
Middlesex Fells: Broadway to Mid- dlesex Fells, Somerville, Medford and Malden,	4.32	-	.28	4.60
Mystic Valley: High Street to Mid- dlesex Fells Reservation, Medford and Winchester,	2.90	-	-	2.90
Nahant Beach: Lynn line at Wash- ington Street to Spring Road, Nahant,	-	-	2.23	2.23
Neponset River: junction of River Street and Damon Street to Milton Street, Hyde Park and Milton, .	-	-	1.12	1.12
Revere Beach: Revere Beach Reser- vation to Middlesex Fells Parkway and Mystic River Reservation, Re- vere, Chelsea, Everett and Med- ford, . . . . .	.36	3.81	1.07	5.24
Totals,	9.57	3.89	8.66	22.12

TABLE 2. — *Summary of Maps and Plans prepared during Year ending Nov. 1, 1901, omitting Blue and Other Prints.*

	Abandonments and Conveyances.	Construction.	Copies.	Entrances.	General.	Land and Settlement.	Restriction.	Takings, including Conveyances to Commonwealth.	Topographical.	Working Plans (Office).	Totals.
<i>Parkways.</i>											
Balster Brook,	-	-	-	-	-	-	-	-	1	-	1
Blue Hills,	1	23	4	-	2	3	-	1	3	33	70
Fresh Pond,	-	-	-	-	1	2	-	-	-	-	3
Furnace Brook,	8	23	3	-	-	4	-	4	1	23	66
Lynn Fells,	-	-	-	-	1	-	-	-	-	-	1
Middlesex Fells,	-	2	6	1	2	-	3	4	1	2	21
Mystic Valley,	2	3	1	-	2	6	-	3	-	12	29
Nahant Beach,	-	-	-	-	-	3	-	-	4	-	7
Neponset River,	5	-	-	-	-	-	-	1	-	1	7
Revere Beach,	17	38	3	4	3	23	1	9	-	47	145
Totals,	33	89	17	5	11	41	4	22	10	118	350
<i>Reservations.</i>											
Beaver Brook,	-	1	-	-	-	-	-	-	-	-	1
Blue Hills,	-	1	1	1	1	-	-	-	1	3	8
Charles River,	2	18	14	-	5	14	4	5	3	30	95
King's Beach,	-	-	-	-	1	-	-	-	-	-	1
Lynn Shore,	1	3	-	1	1	2	-	-	-	7	15
Middlesex Fells,	-	2	1	2	-	1	-	2	-	10	18
Mystic River,	2	-	1	-	-	14	-	-	-	2	19
Nantasket Beach,	-	-	-	-	3	3	-	-	1	3	10
Neponset River,	6	1	-	-	-	24	-	-	1	4	36
Quincy Shore,	2	-	2	-	1	4	-	-	-	-	9
Revere Beach,	-	2	3	-	2	-	-	-	-	1	8
Stony Brook,	2	-	-	-	-	-	-	-	-	-	2
Winthrop Shore,	1	-	-	-	14	6	-	-	-	2	23
Totals,	16	28	22	4	28	68	4	7	6	62	245
Grand totals,	49	117	39	9	39	109	8	29	16	180	595

TABLE 3. — Summary of Vouchers of the Engineering Department, including, under Construction and Maintenance, the Entire Estimated Value of Work performed during Year ending Nov. 1, 1901.

	INCIDENTAL TO ENGINEERING DEPARTMENT.											Grand Totals.		
	EQUIPMENT.						OPERATING EXPENSES.						Totals.	
	Offices.	Surveying and Drawing Instru-ments.	Engineering and Sur-veying.	Offices.	Repairs.	Supplies.	Travel.	Incidental Expenses.						
General equipment,	\$51 61	\$46 91	-	-	-	-	-	-	-	-	-	\$98 52	\$98 52	\$98 52
General operating expenses,	-	-	-	\$157 25	\$138 29	\$343 12	-	-	-	-	-	-	1,358 66	1,358 66
<i>Parkways.</i>														
Balster Brook,	-	-	75 10	-	-	-	-	\$0 15	-	-	-	-	75 25	75 25
Blue Hills,	-	-	2,873 34	16 23	-	-	\$68 00	50 24	-	-	-	-	3,007 81	9,870 91
Blue Hills roads,	-	-	407 70	-	-	-	21 00	30	-	-	-	-	429 00	429 00
Deatham,	-	-	2 44	-	-	-	-	-	-	-	-	-	2 44	2 44
Fresh Pond,	-	-	253 05	-	-	-	-	6 50	-	-	-	-	259 55	1,081 23
Furnace Brook,	-	-	2,108 69	-	-	7 40	81 00	7 34	-	-	-	-	2,204 43	2,691 21
Lynn Fells,	-	-	50 75	-	-	-	-	-	-	-	-	-	50 75	50 75
Lynnway,	-	-	15 61	-	-	-	-	-	-	-	-	-	15 61	15 61
Middlesex Fells,	-	-	761 66	-	-	-	-	-	-	-	-	7 64	769 30	1,378 96
Middlesex Fells roads,	-	-	1,972 05	12 94	-	17 83	32 30	50 73	-	-	-	-	2,085 85	11,912 02
Mystic Valley,	-	-	1,120 82	-	-	9 77	68 60	10 05	-	-	-	-	1,209 24	12,711 07
Nahant Beach,	-	-	301 85	-	-	4 25	36 00	8 90	-	-	-	-	351 00	435 80
Neponset River,	-	-	201 56	-	-	-	-	1 30	-	-	-	-	202 86	202 86
Revere Beach,	-	-	6,978 09	-	-	131 90	28 28	183 43	-	-	-	-	7,321 70	146,699 27
Speed way (Charles River),	-	-	53 91	-	-	3 75	-	1 00	-	-	-	-	58 66	416 93
Parkway totals,	-	-	\$17,176 02	\$29 17	-	\$174 90	\$335 18	\$327 58	-	-	-	-	\$18,043 45	\$18,973 31

<i>Reservations.</i>																				
Beaver Brook,	-	-	-	-	\$98 90	-	-	-	-	-	-	-	-	-	\$6 20	\$105 10	\$105 10	-	-	-
Blue Hills,	-	-	-	-	432 22	-	-	-	-	-	-	-	-	-	4 18	454 40	454 40	-	-	-
Charles River,	\$13,299 56	\$8 90	\$13,308 46	-	3,298 90	\$15 34	\$27 31	-	-	-	-	-	-	-	44 48	3,413 81	16,722 27	-	-	-
Hemlock Gorge,	-	-	-	-	108 78	-	-	-	-	-	-	-	-	-	3 54	128 82	128 82	-	-	-
King's Beach,	-	-	-	-	21 80	-	-	-	-	-	-	-	-	-	-	21 80	21 80	-	-	-
Lynn Shore,	-	-	-	-	486 84	-	-	-	-	-	-	-	-	-	3 25	490 09	490 09	-	-	-
Middlesex Falls,	-	-	-	-	163 94	-	-	-	-	-	-	-	-	-	3 42	214 36	214 36	-	-	-
Mystic River,	-	-	-	-	443 10	-	-	-	-	-	-	-	-	-	10 45	453 55	453 55	-	-	-
Nantasket Beach,	-	-	-	-	335 91	-	-	-	-	-	-	-	-	-	8 35	357 76	357 76	-	-	-
Neponset River,	-	-	-	-	1,073 82	-	-	-	-	-	-	-	-	-	11 12	1,106 44	1,106 44	-	-	-
Quincy Shore,	-	-	-	-	257 58	-	-	-	-	-	-	-	-	-	27 00	286 88	286 88	-	-	-
Revere Beach,	-	-	-	-	692 69	-	-	-	-	-	-	-	-	-	5 00	706 14	706 14	-	-	-
Stony Brook,	-	-	-	-	70 14	-	-	-	-	-	-	-	-	-	-	70 74	70 74	-	-	-
Winthrop Shore,	137 25	-	137 25	-	465 14	-	-	-	-	-	-	-	-	-	11 10	481 24	618 49	-	-	-
Reservation totals,	\$13,436 81	\$8 90	\$13,445 71	-	\$7,949 26	\$15 34	\$27 31	-	-	-	-	-	-	-	\$117 44	\$8,291 13	\$21,736 84	-	-	-
Grand totals,	\$182,742 91	\$632 66	\$183,375 57	\$46 91	\$25,845 88	\$201 76	\$545 33	\$138 29	-	-	-	-	-	-	\$445 02	\$27,791 76	\$211,167 33	-	-	-

TABLE 4. — Summary of Engineering and Surveying.

	Abandonments and Conveyances.	Boundaries, Plans, Staking and Monuments.	Construction and Maintenance, incidental to Act.	Construction, Preliminary to.	General.	Land and Settlements, Surveys and Plans.	Restrictions, Surveys and Plans.	Takings.	Topographical.	Totals.
<i>Parkways.</i>										
Balster Brook,	-	-	-	-	-	-	-	-	\$75 10	\$75 10
Blue Hills,	\$13 73	\$4 70	\$1,229 40	\$1,360 45	\$20 37	\$32 10	-	\$156 27	56 32	2,873 34
Blue Hills Roads,	-	-	-	407 70	-	-	-	-	-	407 70
Dedham,	-	-	-	-	2 44	-	-	-	-	2 44
Fresh Pond,	-	26 60	190 30	17 20	2 45	16 50	-	-	-	253 05
Furnace Brook,	127 86	173 46	23 93	1,177 22	13 48	165 55	\$4 20	228 11	194 88	2,108 69
Lynn Fells,	-	-	-	-	50 75	-	-	-	-	50 75
Lynnway,	-	-	-	13 50	2 11	-	-	-	-	15 61
Middlesex Fells,	-	3 90	253 50	227 13	98 13	43 10	-	86 15	48 85	761 66
Middlesex Fells Roads,	-	-	1,920 95	51 10	-	-	-	-	-	1,972 05
Mystic Valley,	34 10	90 15	664 82	137 20	32 68	125 92	-	35 95	-	1,120 82
Nahant Beach,	-	99 50	-	-	47 32	34 60	-	-	120 43	301 85
Neponset River,	40 15	1 60	1 50	28 50	9 03	5 45	-	115 33	-	201 56
Revere Beach,	324 80	157 74	4,581 99	1,102 11	19 82	595 46	18 72	173 05	4 40	6,978 09
Speedway (Charles River Reservation),	-	-	52 34	-	1 57	-	-	-	-	53 91
Parkway totals,	\$540 64	\$557 65	\$8,918 73	\$4,522 11	\$300 15	\$1,018 68	\$23 82	\$794 86	\$499 98	\$17,176 62

<i>Reservations.</i>												
Beaver Brook,	-	-	-	-	\$98 90	-	-	-	-	-	-	\$98 90
Blue Hills,	\$19 00	\$16 02	\$8 40	\$8 40	26 59	\$0 80	-	-	-	-	\$355 41	432 22
Charles River,	52 72	366 19	815 77	815 77	180 35	473 56	\$34 20	\$140 50	684 06	3,298 90	108 78	21 80
Hemlock Gorge,	-	3 60	12 00	12 00	-	-	-	-	-	-	-	486 84
King's Beach,	-	80	-	-	21 00	-	-	-	-	-	-	163 94
Lynn Shore,	41 30	-	353 85	353 85	43 91	37 28	-	-	-	-	21 00	443 10
Middlesex Falls,	-	20 25	-	-	35 49	66 30	-	17 90	-	-	2 83	335 91
Mystic River,	43 10	39 70	59 07	59 07	20 50	270 60	-	7 30	2 83	2 83	1,073 32	257 58
Nantasket Beach,	-	8 40	111 68	111 68	50 50	100 80	-	-	64 53	64 53	-	692 69
Neponset River,	215 17	128 12	21 00	21 00	27 66	596 64	-	25 00	1 60	1 60	70 14	465 14
Quincy Shore,	90 75	34 70	27 30	27 30	23 13	65 40	-	8 80	7 50	7 50	\$7,949 26	720 00
Revere Beach,	-	27 60	32 55	32 55	156 10	181 00	-	-	259 44	259 44	-	-
Stony Brook,	26 50	15 06	-	-	25 58	-	-	-	-	-	-	-
Winthrop Shore,	8 40	89 40	22 50	22 50	95 92	145 02	-	-	-	-	-	-
Reservation totals,	\$496 94	\$749 84	\$1,464 12	\$1,464 12	\$805 63	\$1,937 40	\$34 20	\$199 50	\$1,396 97	\$1,396 97	\$7,949 26	\$25,845 88
Miscellaneous,	-	-	-	-	720 00	-	-	-	-	-	-	-
Grand totals,	\$1,037 58	\$1,307 49	\$5,986 23	\$5,986 23	\$1,825 78	\$2,956 08	\$58 02	\$994 36	\$1,896 95	\$1,896 95	\$25,845 88	-

TABLE NO. 5. — Prices paid for Principal Items of Construction.

CONTRACT No.,	PARKWAYS.			RESERVATIONS.		
	BLUE HILLS.	REVERE BEACH.		CHARLES RIVER.		MIDDLE-SEX FIELDS.
	53.	54.	55.	51.	56-A.	50-A.
<i>Drains.</i>						
8-inch vitrified pipe (lineal foot),	-	\$0 40	\$0 19	-	-	-
10-inch vitrified pipe (lineal foot),	\$0 50	40	27	-	\$0 40	-
12-inch vitrified pipe (lineal foot),	-	50	32	-	50	\$0 40
15-inch vitrified pipe (lineal foot),	-	75	50	-	75	52
18-inch vitrified pipe (lineal foot),	-	90	65	-	1 00	-
20-inch vitrified pipe (lineal foot),	-	1 00	-	-	1 00	82
24-inch vitrified pipe (lineal foot),	-	-	-	-	-	1 99
30-inch vitrified pipe (lineal foot),	-	-	-	-	3 00	-
6-inch vitrified pipe underdrain (lineal foot),	-	45	-	-	-	-
<i>Edgestones.</i>						
Furnishing and setting (lineal foot),	1 00	1 15	$\left. \begin{array}{l} 75 \\ 1 25 \end{array} \right\}$	-	-	-
<i>Fences.</i>						
Wooden, two rail (lineal foot),	-	-	17	-	-	-
Wooden, one rail (lineal foot),	-	12	13	-	-	-
<i>Grading.</i>						
Earth excavation (cubic yard),	80	19	23	-	30	30
Earth filling (cubic yard),	-	49	52	-	50	-
Rock excavation (cubic yard),	1 75	$\left\{ \begin{array}{l} 1 75 \\ 3 50 \end{array} \right.$	1 75	\$1 50	-	-
<i>Gutters.</i>						
Vitrified brick paved (square yard),	-	2 00	1 70	-	-	-
Cobble-stone paved (square yard),	-	-	-	-	-	70
<i>Masonry.</i>						
Brick (cubic yard),	14 00	13 00	11 00	-	13 00	-
First class stone (cubic yard),	40 00	-	-	-	-	-
Rubble, dry (cubic yard),	-	-	-	-	-	4 25
Rubble, pointed (cubic yard),	-	3 50	-	-	6 00	-
Rubble, in mortar (cubic yard),	6 00	-	-	-	-	-
Concrete, Portland cement (cubic yard),	7 00	-	-	-	-	-
<i>Surfacing.</i>						
Broken stone (square yard),	30	45	45	-	-	-
Gravel roadway (square yard),	-	-	-	-	-	09
Gravel roadway, including furnishing (square yard),	-	-	33	-	28	-
Gravel walk (square yard),	20	21	21	-	-	-
Loam (square yard),	-	-	-	-	-	08
Loam (cubic yard),	-	36	30	-	30	-
Loam, including furnishing (cubic yard),	1 00	1 01	87	-	90	-

APPORTIONMENT COMMISSION.

COMMONWEALTH OF MASSACHUSETTS.

SUPREME JUDICIAL COURT.

SUFFOLK COUNTY.

IN EQUITY.

IN THE MATTER OF THE PETITION OF WILLIAM B.
DE LAS CASAS *et al.*, METROPOLITAN PARK COM-
MISSIONERS, *Petitioners*.

RESERVATION AND REPORT.

This is a petition brought by the Metropolitan Park Commission, under chapter 419 of the Acts of 1899, for the appointment of Commissioners to determine the proportions in which each of the cities and towns of the Metropolitan Park District shall annually pay money into the treasury of the Commonwealth for the first period of five years, to provide for the interest and sinking fund requirements, as estimated by the treasurer of the Commonwealth, for the appropriations and loans authorized by the statutes referred to in said Act of 1899, and to meet the expenses of maintenance and operation, as annually authorized by the General Court, and any deficiency in the estimates and payments, as found by the said Treasurer, and to return their award into this court, as provided by section 1 of said chapter.

Upon said petition the Apportionment Commissioners were appointed, and filed an award, which was objected to by several of the cities and towns interested; this award was accepted by a justice of this court, and the case reported to the full court.

After the coming down of the opinion of the full court (see William B. de las Casas *et al.*, petitioners), the award was re-committed by a decree, a copy of which is hereto attached.

Thereafter said Apportionment Commissioners filed a supplemental award, of which a copy is hereto attached.

The case came on for hearing before me on motion of the Attorney-General for the acceptance of said award, and it appeared that the award was objected to by the city of Newton, the town of Milton and the town of Brookline. The latter town filed a motion to recommit the award, of which a copy is hereto attached.

* I was of the opinion that the questions arising upon the motions of the Attorney-General and of the town of Brookline should be reserved for the consideration of the full court; the previous report by Mr. Justice Barker, together with the tables and schedules and statements annexed thereto, may be referred to and treated as a part of this report; and in the consideration of the questions arising in this case, the full court may assume all the facts and matters stated in said previous report to have been found by me; and I reserve the case for the consideration of the full court, such order and disposition to be made of it as the full court may deem proper.

WILLIAM CALEB LORING, J.S.J.C.

MAY 28, 1901.

COMMONWEALTH OF MASSACHUSETTS.

SUPREME JUDICIAL COURT.

SUFFOLK, SS.

IN EQUITY.

IN RE WILLIAM B. DE LAS CASAS *et als.*, METROPOLITAN PARK COMMISSIONERS, *Petitioners.*

DECREE.

And now, after the filing of the rescript from the Supreme Judicial Court, this cause came on to be heard upon the motions of the town of Brookline, the city of Newton and the city of Cambridge, for the recommittal of the award of said Commissioners; and after hearing counsel for said town of Brookline and counsel for the said petitioners, —

It is ordered, adjudged and decreed that said award be re-committed to said Commissioners, with instructions to report the grounds of their determination in such form as to enable the court to determine whether the award rests entirely on correct propositions of law.

By the court,

JOHN NOBLE,

Clerk.

MARCH 12, 1901.

SUPPLEMENTAL AWARD.

Pursuant to the order of court of March 12, 1901, and as a supplement to their award heretofore filed, the Commissioners of Apportionment appointed in said cause now make the following report of the grounds of their determination: —

At the hearing before us it was claimed by certain municipalities that we should assess by population, — by the town of Brookline, that we should deviate from the ordinary mode of valuation assessment, and make the apportionments on a basis of population and valuation combined. Such a deviation is important. It would increase the assessment of Weymouth one-half and lessen that of Brookline by 40 per cent.

Another series of municipalities claimed that valuation should be the basis of apportionment. The method by population either alone or in combination threatened injustice to the poor and populous towns and cities, and unduly burdened the individual taxpayer in such places for no good reason shown to us by evidence or argument.

The method of apportionment by valuation had also danger of injustice. A valuation already hypothecated to heavy and continuous public duty is not worth its full face value for the purposes of this cause. Another valuation, which easily and at a low rate bears its existing public duties, is more powerful.

We disapproved assessment by population. We deviated somewhat from an assessment by valuation. We started, however, with that method; the same was affected by credits and debits, as later set forth.

Anticipations of Park Expenditures.

A limitation of the liability of the city of Boston to .50 was made by law, by reason of previous large expenditures by that city of parks and driveways open to the public and especially available to the town of Brookline in respect to Jamaica Plain Reservation, Muddy Brook Driveway, the Fenway, Franklin Park and the Arnold Arboretum.

Upon careful inquiry into the facts, this limitation commended itself to our judgment, in respect of both parks and boulevards. In point of fact, it had reduced the percentage of Boston to .50 from about .62 of its proportion on strict valuation basis. But certain other municipalities had an equity to a limitation analogous to that allowed to the city of Boston, or to the established sewer system of Winthrop, referred to in 153 Mass. 584. Notably the city of Cambridge had made great expenditure in similar direction, and to a percentage, as compared with its valuation, even larger than that of the city of Boston in its entire park system. The town of Brookline had in the same way largely anticipated the Metropolitan Park Commission. The city of Lynn had already provided for the public the splendid Lynn Woods, of about two thousand acres, and maintains it.

♦ Other municipalities had done more or less in the same direction. Equity required that we should make allowances to these places, as well as to the city of Boston; and we made it, in corresponding ratios, in favor of Cambridge, Brookline, Lynn, Newton and other places which had made outlay for parks that could properly be deemed part of a Metropolitan Park system.

Park Betterments.

Certain towns claimed that we should assess such betterments against other towns, by reason of their alleged proximity to some park or reservation.

We repeatedly asked the counsel representing the town of Brookline, and others representing similar views, to furnish us evidence why and to what extent this should be done, and were furnished nothing but a list of places which it was claimed by the town of Brookline had received park betterments. We made similar request of a city solicitor, who was making the same claim. His reply was, "I should not care to arouse enmity among my brethren."

It was not shown whether proximity or car facilities were more efficient in bringing visitors to parks, nor whether the enjoyment was by carriage parties from a distance or by foot travel from contiguous towns, nor any statistics, data or evidence as to whence came or where resided the users and enjoyers of the parks, nor their effect upon real estate.

Municipalities containing parks argued for credits for loss of taxable property, and claimed that there was no evidence making park betterment assessments possible, and that to do so would be guess-work. This claim was found to be true. The subject was left so completely obscure that we could not justify any named betterment figures, and especially could not name the grounds for any such finding. We did not assess any park betterments.

Boulevard Betterments.

It was claimed by the town of Brookline and certain other towns that such betterments ought to be assessed. This was more tangible and practicable. Those great roads appreciated real estate values, obviated need and cost of town ways, etc. The assessment of road betterments is not novel. We were not required to discriminate between abutting owners and the township containing them. In applying our apportionment percentages to boulevard cost, the Commonwealth was by law to pay one-half of such cost. The city of Boston's .50 would cover one-quarter, and the residue one-quarter would devolve on the Metropolitan Park District (exclusive of Boston).

We found that an equal division of this residue between township and district was fair and just, and we assessed one-eighth of boulevard cost against the township wherein such outlay for boulevards (whole or fractional) has been made.

Allowances to Overburdened Cities and Towns.

As stated above, the word "valuation," as a test of strength to bear park burdens, is not satisfying. It may be already pledged to an annual charge of \$19.60, as in Braintree, or \$20.50, as in Weymouth, to take care of roads, lighting, police, fire protection, health, sewers, schools, paupers, etc., as civilization and usage require for a large population, and with little property per capita. On the other hand, the valuation of Nahant, \$6,557,070, with its population of 865, *i. e.*, a wealth per capita of \$7,580 and a tax rate of \$8 on a thousand, pledged for comparatively but little, in respect of duties already existing, for roads, paupers, schools, etc., is stronger.

Suggestions were made to us concerning an alleged tendency of personal wealth towards places of low taxation rates, in what are sometimes styled "refuges from oppression." It is a perfectly legal course for a man to select his home in reference to such a purpose, as well as for purposes of health, ocean breezes, contiguity of friends, etc. It does not, however, follow that, because a refuge town has been favored with immunity from high taxation under laws regulating town, county and State assessment, it is entitled to similar immunity in respect to burdens of the Metropolitan Park District, with its different mode of assessing.

Again, the valuation of Brookline (\$4,593 per capita), hypothecated to existing public duties to the extent of \$10.20 on a thousand, cannot justly be compared in mere proportion of dollars with that of Saugus (\$755 per capita), and already hypothecated to annual public duties to the extent of \$19.80 on a thousand.

A thousand dollars in Saugus is not the equal of the same sum two miles away in Nahant, or four miles away in Swampscott, where the tax rate is \$11. If it be suggested that when assessors value a Saugus house at \$1,000 they discount public burdens, the reply would be, let the citizen owner sell it for that sum; the money is subject in his hands to \$19.80 of annual public duty. Besides, when tax rates grow large, the functionaries do not value down, they value up. We could not learn of any tendency to cure these discrepancies. On the contrary, money does seem to flow to the line of low taxation, and in so doing lowers it still more.

It is true that public burdens heretofore existing have been borne by property valuation, under very numerous laws. The creation of the Metropolitan Park District made a new and pecul-

iar entity. Its outlay was to be enormous, but none of such assessment laws were made applicable to it. No way exists to meet this outlay except by the judgment of Commissioners. The Legislature has prescribed no guide for their judgment except that to be "just and equitable," even going so far as to enact that it shall be "*as they deem*" just and equitable.

This is a striking departure from previous methods of Massachusetts assessment and taxation. The Commissioners' results, to be operative, must meet the approval of the court, — a safeguard against error in law, at any rate, and against any neglect of constitutional rights when such rights apply to towns and cities.

This remarkable deviation from modes heretofore in use for raising funds for public purposes seemed to require us to examine widely, not only in regard to one public requirement, but also into the circumstances and situation to which this new demand has been appended.

We did not feel at liberty to treat this park cost apportionment as an isolated subject, or one devoid of circumstances, but rather as an additional public duty, to be dealt with in connection with those already existing, — as a new burden superinduced upon others already unequally borne, — and that an award might be possible which should leave less inequality for the next five years.

Classification.

We found that the thirty-nine cities and towns of the district readily grouped themselves into three classes. A scientific writer says that a municipality with less than \$1,000 per capita is too weak to meet the requirements of modern civilization and usage.

Class 1 contains the places which we found needed relief (none of their per capita valuations reach \$1,000).

Class 2 contains the great bulk of the average municipalities.

Class 3 contains those of per capita valuations exceeding \$2,000; total valuations about the same as those of Class 1.

The city of Lynn is a specimen of Class 1. It has to provide for the legitimate public needs of 62,354 people, with property per capita \$844; its tax rate is \$18. The town of Weymouth is another, having to provide, as above, for 11,291 people, with a per capita valuation of \$635; its tax rate is \$20.50. Its citizen holding a $3\frac{1}{2}$ per cent. bond of the Commonwealth, with thirty-seven years to run, nets on the market value of his bond but .77 of 1 per cent. Woburn must provide for 14,178 people, with a per capita property of \$740; its tax rate is \$17.80. Chelsea, for 31,264, with a per capita of \$757; its tax rate is \$18.50. Stoneham, for 6,284, with a per capita of \$784; tax rate, \$20.

More fortunate examples are: Milton, per capita, \$4,022; tax rate, \$11. Weston, per capita, \$2,540; tax rate, \$8.

We found that tax rates, no special or temporary circumstance intervening, indicate with a considerable uniformity the per capita wealth or poverty of a town, — high when the per capita valuation is small, low when it is large.

The principle of helping classes of poor towns has recognition (though not a complete analogy) in various general laws relating to school expenditure by allowances from the school fund since Public Statutes, chapter 43, in ratios increasing with subsequent laws; so that towns of less than \$500,000 valuations receive \$300 a year, and when the tax rate in this particular class of towns reaches \$18, \$50 additional.

Those from \$500,000 to \$1,000,000 receive \$200 a year; those from \$1,000,000 to \$2,000,000 receive \$100 a year; those from \$2,000,000 to \$3,000,000 receive \$50 a year; and towns of less than \$350,000 valuation receive \$2 weekly for each teacher.

So, too, the State pays \$1,250 annually to a union district of small towns (for superintendence), and if a town of larger valuation is in the district, the money goes only to the small towns (1893, chapter 272; 1897, chapter 498; 1898, chapter 466).

In determining what percentage allowance ought to be made in favor of Class 1, we found difficulties multiply with increasing percentages; but we were convinced that an abatement of .25 in the assessments upon valuation of Class 1, and a transfer of the amount of the abatements to Class 3, was called for and just, and was within the scope of correctness and safety. We decided to make that abatement, and did so, adding the sum of the abatements, \$15,260, .22, viz., 3.58 per cent. of the entire amount apportioned, to the assessments of the municipalities of Class 3, in proportion to valuation.

Individual Consideration.

After arriving at the apportionment of each municipality upon the foregoing grounds, the commission proceeded to consider the case of each one and the proportion assigned to it, individually and on its own merits. We considered all the evidence and the facts appearing on the views which were taken, and adjudged that on the evidence and facts we deemed each assessment in itself just and equitable.

All prayers for rulings were denied except so far as granted above.

CHARLES FRANCIS ADAMS.
THOMAS M. STETSON.
JOHN C. HAMMOND.

COMMONWEALTH OF MASSACHUSETTS.

SUPREME JUDICIAL COURT.

SUFFOLK, SS.

IN EQUITY.

WILLIAM B. DE LAS CASAS *et al.*, *Petitioners.*

OBJECTIONS OF THE TOWN OF BROOKLINE TO THE AWARD AND SUPPLEMENT THERETO OF THE APPORTIONMENT COMMISSIONERS.

And now comes the town of Brookline, one of the parties respondent in the above-entitled cause, and objects to the said award and supplement thereto of said commissioners, for the following reasons:—

First.— Because it does not appear, from the said award and supplement thereto, that the results arrived at by said Commissioners rest upon sound propositions of law.

Second.— Because the said award is inequitable as respects this respondent, and charges it with an unreasonable and extravagant proportion of the cost apportioned.

Third.— Because it cannot be ascertained, from anything contained in said award and supplement, what the exact method of apportionment adopted by the said Commissioners was; and because said Commissioners have refused to make known the method adopted by them, so as to enable this respondent to follow the method of working out their results, and ascertain whether the excessive share of the cost allotted to this respondent is due to clerical error in computation, or to the consideration of some improper and incompetent ground as the basis of said assessment.

Fourth.— Because there are apparently important errors in the matters stated in said award as the grounds upon which rest the results arrived at by said Commissioners: for example, the statement that the total valuations of Class 3 are “about the same” as those of Class 1, whereas, in fact, the total valuations of all places which can be grouped in Class 1, under the limitations described (that none of their per capita valuations reaches \$1,000), is \$237,744,088; and the total valuation of Class 3 (including places whose per capita valuation exceeds \$2,000), omitting Boston and Cohasset, amounts to \$170,214,406; if Boston and Cohasset are both included, \$1,246,205,217; if Cohasset and not Boston is included, \$176,481,632; and neither of said amounts is “about the same” as the total valuation of Class 1, above mentioned. Also, the statement that the sum of \$15,260.22, transferred from Class 3 to Class 1, is 3.58 per cent. of the entire amount apportioned; whereas, the entire amount apportioned is the amount fixed by the Treasurer of the Commonwealth, as provided by law, to

meet the interest and sinking fund requirements and cost of maintenance; and said amount, for parks, is \$395,941.77; for parks including Nantasket, \$428,707.04; and for parks, boulevards and Nantasket, \$517,923.17; and the said sum of \$15,260.22 is not 3.58 per cent. of either of said amounts. (See the tables hereto annexed.)

Fifth. — Because the said Commission has rejected all consideration of special benefits received by the various cities and towns on account of the parks established as the Metropolitan Park System, for the reason, as alleged in said award, that they were not furnished with statistics and evidence as to “whence came or where resided the users and enjoyers of the parks,” and other evidence which it was obviously impossible for said respondents to introduce; whereas, such benefits are a matter of judgment, within the jurisdiction of said Commissioners to decide, without statistics or such evidence as they have referred to.

Sixth. — Because, although the chairman of said Commissioners informed this respondent that one of the reasons on account of which this respondent was assessed in excess of other municipalities was its proximity to the park system of the city of Boston, which had been constructed prior to the passing of the Metropolitan Park Act, and subsequently stated that this reason would appear in their report (whereupon counsel for this respondent gave written notice to said chairman of the intention of said respondent to object thereto), yet said report, although referring to this consideration by stating that the park system of Boston is “especially available” to this respondent, does not state how much this respondent’s share of said assessment has been added to for that reason; and this respondent says that any benefits derived from such proximity were not due in any way to the cost of the Metropolitan Park System with which said Commissioners had to deal; and any benefit received therefrom had accrued prior to the establishment of said Metropolitan Park System, and was offset by the large expenditures which this respondent had incurred for its own park system, which is especially available to the city of Boston; and the proximity of said Boston parks ought not to be reckoned as a special benefit for which this respondent should be charged, particularly as all consideration of the special benefits resulting from the Metropolitan Parks to other cities or towns has been rejected; and this respondent is informed and believes, and therefore alleges, that said award as respects this respondent rests in part upon the consideration of benefits accruing from said Boston parks, and that such benefits ought not, as a matter of law, to have been considered.

Seventh. — Because it appears that said Commission have adopted an erroneous and illegal method of apportioning said expense, by attempting at the same time to equalize other burdens with which said Commission had nothing to do, and by transferring arbitrarily, and without just ground, the sum of \$15,260.22 from the towns referred to as Class 3 to those referred to as Class 1; the effect of which transfer is to charge this respondent with the payment of \$6,656.89 more annually than it would otherwise be obliged to pay.

Wherefore this respondent moves that said award be set aside, and this case recommitted to said Commissioners for further hearing.

INHABITANTS OF THE TOWN OF BROOKLINE,

By their Attorney,

WILLIAM D. TURNER.

SPECIAL REPORT ON NAHANT BEACH BATH-HOUSE.

[HOUSE, No. 79, 1902.]

COMMONWEALTH OF MASSACHUSETTS.

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled.

The Metropolitan Park Commission presents herewith the special report required by chapter 107 of the Resolves of 1901, upon the matter of a bath-house and sanitary station at Nahant Beach. The resolve is as follows:—

Resolved, That the metropolitan park commission is hereby authorized and requested to investigate the desirability and feasibility of constructing and maintaining a public bath-house and sanitary station upon that part of the metropolitan reservation known as Nahant beach, and to report the result of the investigation to the next general court not later than the second Monday in January.

The Commission has investigated the subject matter of this resolve by personal inspection of Nahant Beach and of its public use during the past summer, by public hearings to official representatives and citizens of Nahant and Lynn, and by the reports and estimates of the Engineer, Architect and Landscape Architect.

Nahant Beach is on the ocean side of the Nahant Shore where it curves into the Lynn Shore at Oceanside Park, a local park of the city of Lynn. It forms part of the Metropolitan Park holdings, which include in this neighborhood nearly all the shore on both the ocean and harbor side of the only highway between Nahant and the main land of Lynn. These holdings were acquired with the concurrence of the selectmen of Nahant, who acted under a vote of the town. With the exception of a few parcels of land, they were entirely the property of the town of Nahant, and were, in effect, a gift made by the town, in order that buildings that were unsightly and distasteful to the townspeople might be removed, and the shore cared for in such a way as to restore and preserve its natural beauty. This desire was not included in any formal agreement, but it is so well understood that the Commission considers it as in effect a trust, to be administered with reasonable regard for both the wishes of the townspeople and the necessities of the public in their use of the reservation.

As soon as possible after acquiring the shore as above described, the Commission caused all buildings to be removed except a few private bath-houses at the end nearest the main portion of Nahant, which had been used by prominent citizens of the town for many years, under a license from the selectmen. The buildings removed were hotels, amusement stands of all kinds, and a large number of bath-houses on the ocean side, and houses, sheds and other minor buildings on the harbor side. The beauty of the beach was immediately restored and made apparent, but the public resorting to the beach were left without the usual and necessary accommodations. A private establishment on the harbor side within the city of Lynn furnished the only accommodations, and out of consideration to the public needs, the general rules of the reservation were modified so as to allow bathers to cross the highway from this establishment in bathing costume to reach the beach within the reservation. Although a very considerable use continued to be made of the beach, there were many protests and requests for improved accommodations.

The above facts, together with the observations of the Commission and its officers, and the testimony given at the hearings in regard to the matter, make it seem clear that there will continue to be a very large use of this beach and shore, and that the public will always require reasonable accommodations of the sort usually provided in the neighborhood of a bathing beach. Such accommodations ought to include sanitariums, a room for the emergencies of sudden illnesses and accidents, detention rooms for those arrested for the violation of the law, bath-houses, and shelters against the sun and sudden showers.

The Commission also finds that it is reasonable to expect that these accommodations will be provided at the expense of the Metropolitan Parks District. Nahant Beach has always been used more largely by people of the adjoining city of Lynn, and of other cities and towns within and even beyond the Metropolitan District, than by the people of Nahant. The adjoining shore within the city of Lynn, while equally beautiful and already developed by the expenditure of considerable money, is not a good bathing beach. In years past Nahant has had no inducement to provide public accommodations on this beach, and Lynn and the people beyond could not provide them. It cannot be reasonably expected that either municipality will in the future wish to pay for the cost of public accommodations on the beach. Nahant has given its property to the District, while Lynn has already provided at its own expense such important local parks that they will be considered valuable additions to the Metropolitan Parks. Both municipalities are somewhat removed from the rest of the District,

and its park system, and yet are obliged to join in the cost of maintaining the system.

In considering the matter of providing accommodations recommended, the Commission has found that the wishes of the townspeople of Nahant, which it believes ought to be respected, happily coincide with what will provide reasonably for the public necessities, and with what will clearly be the best development of the beach as a public park.

Plans embodying these ideas have been prepared in preliminary form, which provide for the necessary buildings of attractive appearance upon land of the reservation on the harbor side, with an approach to the bathing beach on the ocean side by a subway under the highway, — a plan very similar to, but upon a smaller scale than, that adopted and now so successfully in use at Revere Beach. The buildings on the harbor side include 500 bath rooms, and a head-house with public sanitariums, emergency and detention rooms. The highway is to be elevated to the grade of the crest of the beach, which will allow for the subways, and will conform to the grade to the proposed extension of the esplanade of Lynn Oceanside Park, overlooking the bathing beach. By this plan the only available land for buildings of the necessary size is utilized, the attractiveness of the highway is increased, and the wonderful beauty of the uninterrupted sweep of ocean view is preserved.

For economy of first cost and of cost of maintenance, it is planned that the reservation and the bath-house, if built, shall remain under the same general supervision as Revere Beach, and that the laundry and clerical work shall be done at the bath-house on that beach. The buildings on the harbor side will cover an area of about 16,000 square feet, and will cost approximately \$40,000; the equipment with necessary furniture, apparatus for heating water and other machinery, and the equipment of bath suits and towels, will cost \$8,000; the changes in the road and about buildings to conform to the crest of the beach will cost \$18,000; making a total for necessary buildings, work and equipment, of \$66,000. This amount does not include the cost of the esplanade on the ocean side.

[Respectfully submitted,

WILLIAM B. DE LAS CASAS,
EDWIN U. CURTIS,
DAVID N. SKILLINGS,
ELLERTON P. WHITNEY,

Metropolitan Park Commissioners.

Mr. Haskell of the Commission is absent from the State, and therefore does not sign this report.

FINANCIAL STATEMENT.

DEC. 1, 1900, TO DEC. 1, 1901.

Metropolitan Parks Loan,	\$6,855,000 00
Receipts from bath-house, sales, etc.,	198,334 01
	\$7,053,334 01

Expenditures.

General expense:—	
Engineering:—	
Pay rolls,	\$480 00
Expenses,	499 67
	\$979 67
Landscape Architects, ex-	
penses,	13 97
Legal,	2,169 19
Claims,	1,708 34
Salaries,	1,641 68
Plans,	39 17
Stationery,	25 22
Miscellaneous,	27 59
	\$6,604 83

Blue Hills Reservation:—	
Land,	\$1,230 00
Engineering:—	
Pay rolls,	\$432 22
Expenses,	43 18
	475 40
Landscape Architects:—	
Services,	\$550 00
Expenses,	381 99
	931 99
Legal,	5 35
House (partial),	3,759 37
Construction,	738 49
Heater for stable,	205 00
Police,	114 75
Repairs, Marigold Lodge,	56 43
Galvanized pipe,	81 14
Miscellaneous,	3 50
	7,601 42

<i>Amounts carried forward,</i>	\$14,206 25	\$7,053,334 01
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<i>Amounts brought forward,</i>		\$14,206 25	\$7,053,334 01
Middlesex Fells Reservation:—			
Land,	\$2,367 00		
Engineering:—			
Pay rolls, . . . \$458 44			
Expenses, . . . 85 52			
	—————	543 96	
Landscape Architects:—			
Services, . . . \$50 00			
Expenses, . . . 147 44			
	—————	197 44	
Legal,	27 25		
Claims,	3 70		
House (partial),	1,907 28		
Construction,	214 37		
Police,	74 38		
Miscellaneous,	5 95		
	—————	5,341 33	
Revere Beach Reservation:—			
Land,	\$21,982 92		
Engineering:—			
Pay rolls, . . . \$692 69			
Expenses, . . . 13 45			
	—————	706 14	
Legal,	777 38		
Land experts,	1,275 00		
Bath-house,*	10,348 72		
Plans, bathing pool,	500 00		
Police,	131 35		
	—————	35,721 51	
Stony Brook Reservation:—			
Land,	\$1,192 50		
Engineering:—			
Pay rolls, . . . \$70 14			
Expenses, . . . 60			
	—————	70 74	
Landscape Architects:—			
Services, . . . \$100 00			
Expenses, . . . 72 27			
	—————	172 27	
Legal,	11 11		
Claims,	35 00		
Police,	26 50		
Construction,	24 00		
	—————	1,532 12	
<i>Amounts carried forward,</i>		\$56,801 21	\$7,053,334 01

* For itemized account, see page 34.

<i>Amounts brought forward,</i>			\$56,801 21	\$7,053,334 01
Beaver Brook Reservation: —				
Engineering: —				
Pay rolls,		\$99 90		
Expenses,		5 20		
		<u> </u>	\$105 10	
Construction,			16 00	
			<u> </u>	121 10
Hemlock Gorge Reservation: —				
Engineering: —				
Pay rolls,		\$108 78		
Expenses,		20 04		
		<u> </u>	\$128 82	
Landscape Architects, ser-			25 00	
vices,				
Police,			15 75	
Construction,			2 50	
			<u> </u>	172 07
Charles River Reservation: —				
Land,			\$79,731 38	
Engineering: —				
Pay rolls,		\$193 76		
Expenses,		3,298 90		
		<u> </u>	3,492 66	
Landscape Architects: —				
Services,		\$575 00		
Expenses,		356 27		
		<u> </u>	931 27	
Legal,			1,616 57	
Claims,			782 00	
Land experts,			5,183 55	
Construction: —				
Charles River				
Road,		\$9,888 90		
Border Road,		1,654 61		
Labor and ma-				
terials,		1,125 10		
		<u> </u>	12,668 61	
Dredging,			941 30	
Right to maintain landing,			200 00	
Plans, boat house,			50 00	
Advertising,			135 11	
House rent,			200 00	
Police,			56 50	
Miscellaneous,			20 50	
			<u> </u>	106,009 45
<i>Amounts carried forward,</i>			\$163,103 83	\$7,053,334 01

Amounts brought forward, . . . \$163,103 83 \$7,053,334 01

Neponset River Reservation:—

Land, \$32,203 67

Engineering:—

Pay rolls, . . \$1,073 32

Expenses, . . . 26 62

1,099 94

Landscape Architects:—

Services, . . . \$185 00

Expenses, . . . 64 29

249 29

Legal, 1,590 28

Claims, 200 00

Land experts, . . . 1,628 05

Construction, . . . 124 45

Trees, 18 25

Miscellaneous, . . . 18 90

37,132 83

Mystic River Reservation:—

Land, \$50,145 72

Engineering:—

Pay rolls, . . . \$443 10

Expenses, . . . 10 45

453 55

Landscape Architects:—

Services, . . . \$350 00

Expenses, . . . 294 56

644 56

Land experts, . . . 2,425 00

Legal, 179 41

Claims, 280 00

54,128 24

Lynn Shore Reservation:—

Land, \$6,200 00

Engineering:—

Pay rolls, . . . \$486 84

Expenses, . . . 3 25

490 09

Legal, 26 65

Fence, 163 00

Construction, . . . 47 30

Repairs to wall, . . . 45 05

6,972 09

Amounts carried forward, . . . \$261,336 99 \$7,053,334 01

<i>Amounts brought forward,</i>			\$261,336 99	\$7,053,334 01
Quincy Shore Reservation: —				
Land,			\$13,429 00	
Engineering: —				
Pay rolls,		\$257 58		
Expenses,		29 30		
			286 88	
Legal,			31 20	
Claims,			180 00	
				13,927 08
Winthrop Shore Reservation: —				
Land,			\$305 00	
Engineering: —				
Pay rolls,		\$465 14		
Expenses,		16 10		
			481 24	
Legal,			599 75	
Claims,			100 00	
Construction,			366 86	
Police,			87 50	
Sprinkling wagon,			352 45	
Iron bracket,			45 00	
Stand-pipe,			30 00	
Photographs,			17 50	
Miscellaneous,			4 16	
				2,389 46
Hart's Hill Reservation: —				
Land,			\$10,000 00	
Legal,			83 60	
Plans,			3 75	
				10,087 35
King's Beach Reservation: —				
Land,			\$1,500 00	
Engineering pay rolls,			21 80	
				1,521 80
				\$289,262 68
Amounts charged to Dec. 1, 1900,			6,135,498 20	
				6,424,760 88
Balance in hands of State Treasurer,				\$628,573 13
Metropolitan Parks Loan, Series II.,				\$3,025,000 00
Receipts from sales, etc.,				29,907 41
				\$3,054,907 41
<i>Amount carried forward,</i>				\$3,054,907 41

Amount brought forward, \$3,054,907 41

Expenditures.

General expense:—			
Engineering:—			
Pay rolls,	\$344	66	
Expenses,	288	58	
			\$633 24
Landscape Architects:—			
Services,	\$160	00	
Expenses,	75	67	
			235 67
Legal,			2,189 45
Claims,			1,571 67
Stenographic report,			51 75
Miscellaneous,			35 40

			\$4,717 18
Blue Hillis Parkway:—			
Land,	\$16,200	00	
Engineering:—			
Pay rolls,	\$2,873	34	
Expenses,	412	00	
			3,285 34
Landscape Architects:—			
Services,	\$100	00	
Expenses,	82	79	
			182 79
Legal,			383 73
Construction, Mattapan			
Bridge,	5,277	31	
Labor,	190	85	
Repairs, Mattapan Bridge,	388	50	
Architects' services,	530	39	
Advertising,	136	43	
Watering cart,	352	45	
Sand sprinkler,	49	92	
Photographs,	12	00	

			26,989 71
Middlesex Fells Parkway:—			
Land,	\$11,976	19	
Engineering:—			
Pay rolls,	\$761	66	
Expenses,	145	35	
			907 01
Landscape Architects:—			
Services,	\$75	00	
Expenses,	52	90	

			127 90

<i>Am'ts carried forward,</i>	\$13,011	10	\$31,706 89 \$3,054,907 41

<i>Am'ts brought forward,</i>	\$13,011 10	\$31,706 89	\$3,054,907 41
Legal,	119 19		
Experts:—			
Legal, . . . \$625 00			
Claims, . . . 225 00			
	<u>850 00</u>		
Construction (labor and materials),	848 62		
Sand sprinkler,	146 70		
	<u>14,975 61</u>		
 Mystic Valley Parkway:—			
Land,	\$15,195 00		
Engineering:—			
Pay rolls, . . . \$1,120 82			
Expenses, . . . 84 10			
	<u>1,204 92</u>		
Landscape Architects, expenses,	23 80		
Legal,	173 51		
Experts:—			
Legal, . . . \$175 00			
Claims, . . . 8 00			
	<u>183 00</u>		
Construction (labor and materials),	9,411 22		
Sand sprinkler,	98 18		
Miscellaneous,	1 00		
	<u>26,290 63</u>		
 Revere Beach Parkway:—			
Land,	\$101,169 68		
Engineering:—			
Pay rolls, . . . \$7,030 27			
Expenses, . . . 355 31			
	<u>7,385 58</u>		
Landscape Architects:—			
Services, . . . \$125 00			
Expenses, . . . 74 16			
	<u>199 16</u>		
Legal,	1,337 68		
Experts:—			
Legal, . . . \$1,681 85			
Claims, . . . 1,515 00			
	<u>3,196 85</u>		
 <i>Am'ts carried forward,</i>	<u>\$113,288 95</u>	<u>\$72,973 13</u>	<u>\$3,054,907 41</u>

<i>Am'ts brought forward, .</i>	\$113,288 95	\$72,973 13	\$3,054,907 41
Construction:—			
Contract, .	\$123,428 45		
Labor and mate-			
rials, . . .	2,436 90		
	<u>125,865 35</u>		
Edgestone, Waverley Ave-			
nue entrance, . . .		37 14	
Photographs, . . .		116 00	
Advertising, . . .		393 28	
Sand sprinkler, . . .		11 86	
Miscellaneous, . . .		1 88	
	<u>239,714 46</u>		
Neponset River Parkway:—			
Land,	\$6,575 41		
Engineering:—			
Pay rolls, . . .	\$201 56		
Expenses, . . .	14 80		
	<u>216 36</u>		
Landscape Architects, ex-			
penses,		1 96	
Legal,		10 22	
Experts:—			
Legal,	\$270 00		
Claims,	150 00		
	<u>420 00</u>		
	<u>7,223 95</u>		
Fresh Pond Parkway:—			
Land,	\$12,000 00		
Engineering:—			
Pay rolls, . . .	\$253 05		
Expenses, . . .	18 70		
	<u>271 75</u>		
Landscape Architects:—			
Services,	\$25 00		
Expenses,	18 12		
	<u>43 12</u>		
Legal,		33 02	
Crossing, Brattle Street, .		195 17	
Construction (labor and ma-			
terials),		273 00	
Sand sprinkler,		18 34	
Signs,		40 50	
Photographs,		7 50	
Advertising,		2 00	
Serving betterment notices, .		4 00	
	<u>12,888 40</u>		
<i>Amounts carried forward,</i>		\$332,799 94	\$3,054,907 41

<i>Amounts brought forward,</i>		\$332,799 94	\$3,054,907 41
Furnace Brook Parkway:—			
Land,		\$42,704 39	
Engineering:—			
Pay rolls,	\$2,322 80		
Expenses,	134 41		
	—————	2,457 21	
Landscape Architects:—			
Services,	\$150 00		
Expenses,	44 96		
	—————	194 96	
Legal,		653 18	
Experts, claims,		755 00	
Bound stones,		234 00	
		—————	46,998 74
Nahant Beach Parkway:—			
Engineering:—			
Pay rolls,	\$214 73		
Expenses,	126 15		
	—————	\$340 88	
Legal,		137 05	
Experts, claims,		75 00	
Construction (labor),		350 50	
Removal of hulks and débris,		175 00	
Photographs,		70 00	
Removing dead horse,		5 00	
Signs,		4 80	
Miscellaneous,		12 55	
		—————	1,170 78
Charles River Speedway:—			
Engineering:—			
Pay rolls,	\$53 91		
Expenses,	9 77		
	—————	\$63 68	
Construction (labor and materials),		112 10	
Fence,		120 00	
Photographs,		20 00	
		—————	315 78
Blue Hills Roads:—			
Engineering:—			
Pay rolls,	\$407 70		
Expenses,	30		
	—————	\$408 00	
		—————	408 00
<i>Amounts carried forward,</i>		\$381,693 24	\$3,054,907 41

<i>Amounts brought forward,</i>	\$381,693 24	\$3,054,907 41
Middlesex Fells Roads:—		
Engineering:—		
Pay rolls,	\$1,677 55	
Expenses,	65 76	
	<hr/>	\$1,743 31
Construction:—		
Whitmore Brook entrance,	\$9,742 70	
Labor and materials,	1,633 47	
	<hr/>	11,376 17
Advertising,	101 24	
Miscellaneous,	4 25	
	<hr/>	13,224 97
Lynnway:—		
Engineering pay rolls,	\$15 61	
	<hr/>	15 61
Middlesex Fells and Lynn Woods:—		
Engineering pay rolls,	\$50 75	
	<hr/>	50 75
		<hr/>
		\$394,984 57
Amount charged to Dec. 1, 1900,	2,453,343 49	
	<hr/>	2,848,328 06
Balance in hands of State Treasurer,		\$206,579 35
		<hr/>
Nantasket Beach Loan,		\$700,000 00
Receipts, rents, etc.,		5,881 50
		<hr/>
		\$705,881 50
		<hr/>
		<i>Expenditures.</i>
Land,	\$136,624 19	
Engineering:—		
Pay rolls,	\$335 91	
Expenses,	21 85	
	<hr/>	357 76
Landscape Architects:—		
Services,	\$175 00	
Expenses,	182 24	
	<hr/>	357 24
Legal,	1,222 68	
Police station,	13,481 58	
	<hr/>	
<i>Amounts carried forward,</i>	\$152,043 45	\$705,881 50

<i>Amounts brought forward,</i>	\$152,043 45	\$705,881 50
Repairs on buildings,	3,232 90	
Hook and ladder truck,	614 50	
Police,	417 50	
Filling,	\$700 70	
Loam,	370 30	
	<hr/>	1,071 00
Advertising,	412 31	
Laying brick,	356 40	
Well,	83 00	
Coal,	78 00	
Photographs,	31 00	
Water rates,	19 60	
Miscellaneous,	60 00	
	<hr/>	\$158,419 66
Amount charged to Dec. 1, 1900,	466,075 46	
	<hr/>	624,495 12
Balance in hands of State Treasurer,		\$81,386 38
		<hr/> <hr/>

METROPOLITAN PARKS SYSTEM MAINTENANCE.

Appropriation for 1901, \$120,950 00

Expenditures.

General expense:—

Salaries,	\$9,350 00
Rent,	3,160 49
Steam road roller,	2,800 00
Asphalt roller,	1,095 00
Maps and books,	894 53
Stationery,	689 10
Office expenses,	348 58
Travelling expenses,	325 51
Expenses of apportionment commission,	322 41
Telephones,	164 18
Safe,	159 00
Typewriters and cabinet,	120 40
Filing cabinet,	117 50
Bill file and index,	95 00
Police,	70 81
Book case,	51 39
Photographs,	49 00
Clocks,	20 50

Am'ts carried forward, \$19,833 40

\$120,950 00

<i>Am'ts brought forward, .</i>	\$19,833 40	\$120,950 00
Towel supply,	28 25	
Letter press,	20 00	
Electrical work,	20 00	
Legal blank case,	16 70	
Lecture illustrating,	23 35	
Umbrella stand,	3 49	
Desk,	8 50	
	<hr/>	\$19,953 69

Blue Hills Reservation:—

Labor,	\$5,456 48	
Police,	5,902 92	
Repair of roads,	1,894 35	
Forestry,	2,555 75	
Repairs, Hillside Street,	1,647 17	
General supplies,	375 80	
Keep of horses,	1,607 80	
Horses, carriages, etc.,	937 15	
Repairs,	302 04	
Telephones,	234 73	
Tree guards,	98 46	
Installing lights in stable,	47 50	
Stationery,	23 30	
Chairs,	20 00	
Travelling expenses,	19 16	
Electric connections,	13 60	
Express,	9 49	
Water rates,	7 04	
Miscellaneous,	23 89	
	<hr/>	21,176 63

Middlesex Fells Reservation:—

Labor,	\$7,562 67	
Police,	5,716 74	
Lighting,	501 48	
Repairs of roads,	4,156 00	
General supplies,	1,713 52	
Sheds,	912 46	
Forestry,	698 80	
Keep of horses,	563 16	
Horses, carriages, etc.,	465 12	
Telephones,	418 12	
Repairs,	215 00	
Travelling expenses,	109 28	
Painting house, headquarters,	100 00	
	<hr/>	\$23,132 35
<i>Am'ts carried forward, .</i>	\$23,132 35	\$41,130 32
		\$120,950 00

<i>Am'ts brought forward,</i>	\$23,132 35	\$41,130 32	\$120,950 00
Removing wire fence,	63 00		
Express,	48 38		
Transporting gypsy moth apparatus,	36 00		
Screens,	27 50		
Outside windows,	25 36		
Water rates,	23 50		
Duck,	17 05		
Water connection,	9 16		
Signs,	2 40		
Miscellaneous,	81 53		
	<hr/>	23,466 23	

Revere Beach Reservation:—

Labor,	\$3,327 34		
Police,	11,138 20		
Watering,	499 20		
Lighting,	2,045 51		
Repairs of roads,	1,837 48		
General supplies,	610 30		
Brick,	1,066 00		
Keep of horses,	369 49		
Horses, carriages, etc.,	294 25		
Repairs,	270 66		
Telephones,	260 13		
Canvas covers,	159 10		
Stone dust,	126 25		
Loam,	97 38		
Setting edgestones,	92 95		
Trees,	73 16		
Building catch-basin,	56 64		
Driving poles,	60 00		
Teaming bricks,	43 75		
Screens for fountain,	28 00		
Rubbish barrels,	38 40		
Travelling expenses,	37 22		
Brick paving,	27 50		
Water rates,	24 00		
Bathing checks,	9 00		
Express,	22 13		
Stationery,	8 05		
Frame,	4 50		
Posters,	1 50		
Cleaning catch-basin,	4 00		
Miscellaneous,	70 01		
	<hr/>	22,702 10	

Amounts carried forward, \$87,298 65 \$120,950 00

Amounts brought forward, . . . \$87,298 65 \$120,950 00

Stony Brook Reservation:—

Labor,	\$1,328 35	
Police,	1,290 72	
Repairs of roads,	380 30	
Forestry,	672 40	
General supplies,	93 19	
Keep of horses,	128 36	
Repairs,	104 93	
Telephones,	80 85	
Water rates,	62 00	
Travelling expenses,	24 70	
Horses, carriages, etc.,	13 70	
Signs,	10 88	
Inserting bracket lamp,	5 12	
Screen doors,	3 30	
Miscellaneous,	3 55	
	<hr/>	4,202 35

Beaver Brook Reservation:—

Labor,	\$1,367 29	
Police,	192 40	
General supplies,	441 58	
Repairs,	145 11	
Keep of horses,	129 84	
Tree guards,	42 57	
Telephones,	28 67	
Laying floor,	24 00	
Horses, carriages, etc.,	17 42	
Gravel,	9 75	
Buoys,	9 50	
Miscellaneous,	13 90	
	<hr/>	2,432 03

Hemlock Gorge Reservation:—

Labor,	\$336 60	
Police,	912 77	
General supplies,	131 12	
Repairs,	67 70	
Furniture,	61 00	
Floats,	44 11	
Water rates,	40 00	
Fence, Elliott Street,	18 24	
Flag halyards,	1 80	
Travelling expenses,	1 23	
Signs,	1 00	
	<hr/>	1,615 57

Amounts carried forward, . . . \$95,548 60 \$120,950 00

Amounts brought forward, . . . \$95,548 60 \$120,950 00

Charles River Reservation, Riverside

Section:—

Labor,	\$1,545 61	
Police,	2,030 41	
Repairs of roads,	157 60	
General supplies,	328 09	
Loam,	195 55	
Fencing,	93 90	
Repairs,	85 19	
Life-saving appliances and care,	75 00	
Travelling expenses, . . .	54 89	
Canoe,	40 20	
Row boat,	30 00	
Telephones,	37 39	
Water rates,	28 86	
Shades, Forest Grove, . . .	20 45	
Signs,	15 50	
Storage of launch,	10 00	
Trees,	9 25	
Launch poles and pennants,	9 00	
Steering wheel,	7 65	
Barrels for float,	6 00	
Miscellaneous,	22 78	
	<hr/>	4,803 32

Charles River Reservation, Speedway

Section:—

Labor,	\$4,820 58	
Police,	3,925 03	
General supplies,	503 21	
Watering,	1,191 55	
Fencing,	275 04	
Repairs to Gillespie and Pierce wharf,	550 88	
Loam and carting,	752 20	
Horses, carriages, etc., . . .	606 55	
Keep of horses,	578 32	
Repairs,	397 78	
Grass seed,	60 20	
Telephones,	67 78	
Trees,	59 00	
Water rates,	55 75	
Gravel,	52 50	
Storm porch on office,	37 00	
Lighting,	21 90	
	<hr/>	

Am'ts carried forward, . \$14,055 27 \$100,351 92 \$120,950 00

<i>Am'ts brought forward,</i>	\$14,055 27	\$100,351 92	\$120,950 00
Grates,	16 02		
Stationery,	7 86		
Travelling expenses,	7 60		
Ice,	8 67		
Advertising,	5 25		
Miscellaneous,	32 75		
	<hr/>	14,133 42	
Neponset River Reservation:—			
Labor,	\$653 42		
Forestry,	543 55		
Travelling expenses,	5 00		
Miscellaneous,	1 45		
	<hr/>	1,203 40	
Mystic River Reservation:—			
Labor,	\$12 60		
Water rates,	58 40		
Cleaning cesspool,	16 00		
Repairs,	11 91		
Miscellaneous,	56		
	<hr/>	99 47	
Lynn Shore Reservation:—			
Labor,	\$134 13		
Police,	710 96		
Breakwater and repairs on wall,	330 00		
Filling cellars and fence,	235 65		
General supplies,	35 90		
Telephones,	18 84		
Travelling expenses,	16 25		
Miscellaneous,	20 60		
	<hr/>	1,502 33	
Quincy Shore Reservation:—			
Labor,	\$65 00		
	<hr/>	65 00	
Winthrop Shore Reservation:—			
Police,	\$865 37		
Watering,	656 75		
Labor,	636 25		
General supplies,	97 51		
Pointing wall, etc.,	40 00		
Horses, carriages, etc.,	26 00		
	<hr/>		
<i>Am'ts carried forward,</i>	\$2,341 88	\$117,355 54	\$120,950 00

<i>Am'ts brought forward,</i>	\$2,341 88	\$117,355 54	\$120,950 00
Repairs,	23 60		
Changing stand-pipe, . .	10 48		
Miscellaneous,	2 60		
	<hr/>	2,358 56	
			119,714 10
Balance,			<hr/> <hr/> \$1,235 90

METROPOLITAN PARKS SYSTEM MAINTENANCE, SERIES II.

Appropriation for 1901, \$60,450 00

Expenditures.

General expense:—

Salaries,	\$7,168 15	
Rent,	2,714 18	
Rock-crushing plant, . .	2,200 00	
Stationery,	529 18	
Maps and books,	441 65	
Office expenses,	261 38	
Telephones,	175 26	
Travelling expenses, . .	74 75	
Typewriter,	60 50	
Photographs,	60 00	
Files,	57 00	
Towel supply,	45 20	
Taking down and storing awnings,	20 90	
Lecture illustrating, . .	8 00	
Desk chair,	7 00	
Miscellaneous,	10 45	
	<hr/>	\$13,833 60

Blue Hills Parkway:—

Labor,	\$1,195 80	
Police,	3,071 45	
Repairs of roads,	1,079 75	
Watering,	1,347 77	
Lighting,	2,430 00	
General supplies,	26 44	
Dam, Canton Avenue, . .	503 45	
Water rates,	108 74	
Telephones,	96 49	
Horses, carriages, etc., .	81 55	
Miscellaneous,	9 90	
	<hr/>	9,951 34

Amounts carried forward, \$23,784 94 \$60,450 00

Amounts brought forward, . . . \$23,784 94 \$60,450 00

Middlesex Fells Parkway:—

Labor,	\$3,164 24	
Police,	4,319 44	
Repairs of roads,	3,366 38	
Watering,	2,936 00	
Lighting,	6,030 00	
General supplies,	157 12	
Horses, carriages, etc.,	225 15	
Repairs,	174 75	
Telephones,	95 20	
Tree guards,	71 28	
Trees,	24 76	
Express,	1 50	
	<hr/>	20,565 82

Mystic Valley Parkway:—

Labor,	\$2,644 48	
Police,	2,025 45	
Repairs of roads,	400 00	
Watering,	1,160 12	
Lighting,	2,580 00	
General supplies,	283 20	
Loam,	312 50	
Telephones,	238 85	
Repairs,	172 30	
Stationery,	93 00	
Horses, carriages, etc.,	66 19	
Drinking fountain,	62 00	
Trees,	58 20	
Water rates,	29 00	
Keep of horses,	26 35	
Miscellaneous,	12 85	
	<hr/>	10,164 49

Revere Beach Parkway:—

Labor,	\$405 33	
Police,	779 00	
Watering,	400 00	
Lighting,	252 71	
General supplies,	248 14	
Re-covering Beachmont		
Bridge,	655 20	
Horses, carriages, etc.,	466 00	
Miscellaneous,	8 26	
	<hr/>	3,214 64

Amounts carried forward, \$57,729 89 \$60,450 00

Amounts brought forward, \$57,729 89 \$60,450 00

Fresh Pond Parkway:—

Labor,	\$241 20	
Police,	808 50	
Watering,	174 54	
Lighting,	552 67	
Trees,	66 96	
Tool house,	65 00	
Loam,	35 00	
Carting loam,	30 00	
		1,973 87

Nahant Beach Parkway:—

Labor,	\$540 00	
Telephones,	32 36	
Rubbish barrels,	19 20	
Travelling expenses,	3 35	
Miscellaneous,	5 66	
		600 57

Stony Brook Roads:—

Miscellaneous labor,	\$7 65	
Repair of roads, labor,	58 20	
		65 85

60,370 18

Balance, \$79 82

NANTASKET BEACH MAINTENANCE.

Appropriation for 1901, \$15,000 00

Expenditures.

Labor,	\$1,641 65
Police,	8,245 09
Repair of roads,	1,445 83
Watering,	641 45
Lighting,	1,098 47
General supplies,	906 67
Water rates,	190 00
Work at café,	197 51
Telephones,	93 48
Repairs,	87 09
Dory,	54 56
Fittings and furnishings for dormitory and station,	153 26
Travelling expenses,	39 78
Disinfectant,	37 50

Amounts carried forward, \$14,832 34 \$15,000 00

<i>Amounts brought forward,</i>	\$14,832 34	\$15,000 00
Physician's services,	24 00	
Architect's services,	30 00	
Electrical work, dormitory and station,	18 78	
Maps and books,	5 47	
Bathing cheeks,	5 00	
Express charges,	29 85	
Miscellaneous,	36 67	
	<hr/>	14,982 11
Balance,		<u>\$17 89</u>

METROPOLITAN PARKS EXPENSE FUND.

Receipts to Jan. 1, 1902,		\$63,354 61
Expenditures:—		
Revere Beach Reservation:—		
Bath-house,*	\$21,164 55	
Repairs, Ocean Avenue,	85 00	
	<hr/>	\$21,249 55
Charles River Reservation:—		
Construction, Moody Street and Forest Grove,	1,623 85	
Neponset River Reservation:—		
Repairs to houses,	153 06	
Mystic River Reservation:—		
Repairs to houses,	15 39	
Quiney Shore Reservation:—		
Rebate on bath-house rent,	20 00	
Blue Hills Parkway:—		
Commission for renting house,	10 50	
Revere Beach Parkway:—		
Repairs to houses,	33 42	
Neponset River Parkway:—		
Water connections,	23 26	
Nantasket Beach Reservation:—		
Alterations and repairs on buildings,	\$4,972 55	
Board walk,	182 00	
Furnishings, dormitory,	86 40	
	<hr/>	5,240 95
	<hr/>	28,369 98
Balance,		<u>\$34,984 63</u>

* For itemized account, see page 34.

KEY TO LETTERS AND FIGURES ON THE MAP.

METROPOLITAN HOLDINGS.

- | | |
|---|--|
| <p>A. King's Beach and Lynn Shore.
 B. Revere Beach.
 C. Revere Beach Parkway.
 D. Fellsway.
 E. Fellsway East.
 F. Fellsway West.
 G. Middlesex Fells Reservation.
 H. Mystic Valley Parkway.
 J. Beaver Brook Reservation.
 K. Charles River Reservation.
 L. Hemlock Gorge Reservation.
 M. Stony Brook Reservation.</p> | <p>N. Neponset River Parkway.
 O. Blue Hills Parkway.
 P. Blue Hills Reservation.
 Q. Nantasket Beach Reservation.
 R. Quincy Shore Reservation.
 S. Fowl Meadows.
 T. Neponset River Reservation.
 U. Mystic River Reservation.
 V. Fresh Pond Parkway.
 W. Whitmore Brook Entrance.
 X. Furnace Brook Parkway.</p> |
|---|--|

OPEN SPACES.

- | | CONTROLLED BY— |
|---|---------------------------------------|
| 1. Boston Common | Boston Department of Public Grounds. |
| 2. Public Garden | Boston Department of Public Grounds. |
| 3. Commonwealth Avenue | Boston Park Commission. |
| 4. Charlesbank | Boston Park Commission. |
| 5. Back Bay Fens | Boston Park Commission. |
| 6. Blackstone Square | Boston Department of Public Grounds. |
| 7. Franklin Square | Boston Department of Public Grounds. |
| 8. Monument Square | Bunker Hill Monument Association. |
| 9. Charlestown Heights | Boston Park Commission. |
| 10. Charlestown Playground | Boston Park Commission. |
| 11. Wood Island Park | Boston Park Commission. |
| 12. Commonwealth Park | Boston Department of Public Grounds. |
| 13. Telegraph Hill | Boston Department of Public Grounds. |
| 14. Independence Square | Boston Department of Public Grounds. |
| 15. Marine Park | Boston Park Commission. |
| 16. Castle Island | Boston Park Commission. |
| 17. Rogers Park | Boston Department of Public Grounds. |
| 18. Chestnut Hill Reservoir | Metropolitan Water Board. |
| 19. Longwood Playground | Brookline Park Commission. |
| 20. Brookline Avenue Playground | Brookline Park Commission. |
| 21. Cypress Street Playground | Brookline Park Commission. |
| 22. Muddy River Parkway | Boston and Brookline Park Commission. |
| 23. Old Brookline Reservoir | Boston Water Board. |
| 24. Brookline Reservoir | Brookline Water Department. |
| 25. Fisher Hill Reservoir | Boston Water Board. |
| 26. Madison Square | Boston Department of Public Grounds. |
| 27. Orchard Park | Boston Department of Public Grounds. |
| 28. Parker Hill Reservoir | Boston Water Board. |
| 29. Highland Park | Boston Department of Public Grounds. |
| 30. Washington Park | Boston Department of Public Grounds. |

OPEN SPACES.	CONTROLLED BY—
31. Fountain Square	Boston Department of Public Grounds.
32. Jamaica Pond	Boston Park Commission.
33. Arnold Arboretum	Boston Park Commission.
34. Franklin Park	Boston Park Commission.
35. Franklin Field	Boston Park Commission.
36. Dorehester Park	Boston Park Commission.
37. Squaw Rock	Boston Sewage Department.
38. Moon Island	Boston Sewage Department.
39. Merrymount Park	Quincy Park Commission.
40. Faxon Park	Quincy Park Commission.
41. Quincy Water Reserve	Quincy Water Commission.
42. French's Common	Braintree Selectmen.
43. Webb Park	Weymouth Park Commission.
44. Beals Park	Weymouth Park Commission.
45. Hull Common	Hull Park Commission.
46. Dedham Common	Dedham Selectmen.
47. Boston Parental School	Trustees.
48. Brookline Water Works	Brookline Water Department.
49. Brookline Water Reserve	Brookline Water Department.
50. Brookline Water Reserve	Brookline Water Department.
51. Newton Water Reserve	Newton Water Board.
52. Needham Common	Needham Selectmen.
53. Waban Hill Reservoir	Newton Water Board.
54. Farlow Park	Newton Street Commission.
55. Newton Centre Playground and Green	Newton Street Commission.
56. River Park, Weston	Weston Park Commission.
57. Auburndale Park	Newton Street Commission.
58. River Park, Auburndale	Newton Street Commission.
59. Stony Brook Storage Basin	Cambridge Water Board.
60. Waltham Water Works	Waltham Water Board.
61. Waltham Common	Waltham Department of Public Grounds.
62. Saltonstall Park	Watertown Park Commission.
63. United States Arsenal	National Government.
64. Fresh Pond Park	Cambridge Water Board.
65. Cambridge Common	Cambridge Park Commission.
66. Broadway Park	Cambridge Park Commission.
67. The Esplanade	Cambridge Park Commission.
68. Central Hill Park	Somerville Department of Public Grounds.
69. Broadway Park	Somerville Department of Public Grounds.
70. Nathan Tufts Park	Somerville Department of Public Grounds.
71. Mystic Reservoir	Boston Water Board.
72. Mystic Water Works	Boston Water Board.
73. Arlington Heights	Arlington Water Commission.
74. Arlington Water Reserve	Arlington Water Commission.
75. Lexington Common	Lexington Selectmen.
76. Boston Water Reserve	Boston Water Board.
77. Winchester Common	Winchester Selectmen.
78. Woburn Park	Woburn Park Commission.
79. Cotymore Lea	Malden Park Commission.
80. Sheridan Park	Malden Park Commission.
81. Fellsmere	Malden Park Commission.
82. Craddock Field	Malden Park Commission.
83. Ferryway Green	Malden Park Commission.
84. Playground	Stoneham Selectmen.
85. Wakefield Common	Wakefield Selectmen.
86. Lake Park	Wakefield Selectmen.
87. Sewall's Wood	Melrose Park Commission.
88. Eastern Common	Melrose Park Commission.
89. Waite's Mount	Malden Park Commission.
90. Malden Water Works	Malden Water Board.
91. Union Park	Chelsea Park Commission.
92. United States Marine and Naval Hospital	National Government.

OPEN SPACES.	CONTROLLED BY —
93. United States Battery	National Government.
94. United States Battery	National Government.
95. Lynn Common	Lynn Park Commission.
96. Lynn Woods	Lynn Park Commission.
97. Lynn Water Reserve	Lynn Water Board.
98. Meadow Park	Lynn Park Commission.
99. Oceanside Terrace	Lynn Park Commission.
100. Nahant Long Beach	} Transferred to Metropolitan Park Commission.
101. Nahant Short Beach	
102. Devereux Beach	Marblehead Selectmen.
103. Marblehead Park	Marblehead Park Commission.
104. Crocker Rock	Marblehead Park Commission.
105. Fort Sewall	Marblehead Selectmen.
106. Fort Glover	Marblehead Selectmen.
107. Prospect Hill	Waltham Department of Public Grounds.
108. Rindge Field	Cambridge Park Commission.
109. Winthrop Square	Cambridge Park Commission.
110. Cambridge Field	Cambridge Park Commission.
111. The Front	Cambridge Park Commission.
112. Charles River Parkway	Cambridge Park Commission.
113. Hastings Square	Cambridge Park Commission.
114. North Brighton Playground	Boston Park Commission.
115. Billings Field	Boston Park Commission.
116. Milton Playground	Milton Selectmen.
117. Milton Hill	Trustees Public Reservations.
118. Neponset Playground	Boston Park Commission.
119. Christopher Gibson Playground	Boston Park Commission.
120. M Street Playground	Boston Park Commission.
121. Mystic Playground	Boston Park Commission.
122. North End Park	Boston Park Commission.
123. West Roxbury Parkway	Boston Park Commission.
124. Watertown Water Works	Watertown Water Board.
125. Bullough Pond Park	Newton Street Commission.
126. Crystal Lake	Newton Street Commission.
127. Islington Park	Newton Street Commission.
128. Wolcott Park	Newton Street Commission.
129. Lincoln Park	Newton Street Commission.
130. Linwood Avenue Park	Newton Street Commission.
131. Elmwood Park	Newton Street Commission.
132. Washington Park	Newton Street Commission.
133. Cabot Park	Newton Street Commission.
134. Boyd's Pond Park	Newton Street Commission.
135. Walnut Park	Newton Street Commission.
136. Kenrick Park	Newton Street Commission.
137. Loring Park	Newton Street Commission.
138. Lower Falls Park	Newton Street Commission.
139. Hobbs Brook Storage Basin	Cambridge Water Board.
140. Adams Park	Weymouth Park Commission.
141. Ward 4 Playground	Quincy Park Commission.
142. Heath Street Lot	Brookline Park Commission.
143. Dudley Street Triangle	Brookline Park Commission.
144. Newton Street Reserve	Brookline Water Department, Street Department, and Overseers of Poor.
145. Payson Park Reservoir	Cambridge Water Board.
146. Dana Square	Cambridge Park Commission.
147. Fort Washington	Cambridge Park Commission.
148. Clifton Grove	Malden Park Commission.
149. Menotomy Rock Park	Arlington Park Commission.
150. Russell Park	Arlington Park Commission.
151. Meadow Park	Arlington Park Commission.
152. Great Meadows	Arlington Water Commission.
153. Belmont	Belmont Selectmen.
154. How Park	Watertown Park Commission.

OPEN SPACES.	CONTROLLED BY—
155. Whitney Hill Park	Watertown Park Commission.
156. Highway Lot	Watertown Highway Department.
157. Irving Park	Watertown Park Commission.
158. Knowles Delta	Watertown Park Commission.
159. Wellesley Water Works	Wellesley Water Board.
160. Maugus Hill Reservoir	Wellesley Water Board.
161. Stone Park Playground	Dedham Park Commission.
162. Hamilton Park	Hyde Park Commission.
163. Little Pond Reservation	Braintree Water Board.
164. Stand Pipe	Braintree Water Board.
165. City Park	Everett Park Commission.
166. Brooks Park	Medford Park Commission.
167. Magoun Park	Medford Park Commission.
168. Logan Park	Medford Park Commission.
169. Public Common	Medford Park Commission.
170. Governor Avenue	Medford Park Commission.
171. Hastings Park	Medford Park Commission.
172. Brooks Playstead	Medford Park Commission.
173. Prospect Hill Park	Somerville Department of Public Grounds.
174. Lincoln Park	Somerville Department of Public Grounds.
175. Playground and High-service Pump- ing Station.	Somerville Department of Public Grounds and Water Board.
176. Everett Avenue Park and Playground	Chelsea Park Commission.
177. Washington Park	Chelsea Park Commission.
178. Powder Horn Park	Chelsea Park Commission, Water Board and Soldiers' Home.
179. Willow Street Park	Chelsea Park Commission.
180. Leased Common	Nahant Selectmen.
181. Dover Common	Dover Park Commission.
182. Water Reservation	Needham Water Commission.
183. Ryan's Hill Standpipe	Needham Water Commission.
184. Highlandville Common	Needham Selectmen.
185. Dedham Avenue Triangle	Needham Selectmen.
186. Ward 3 Playground	Quincy Park Commission.
187. Ward 6 Playground	Quincy Park Commission.
188. Sewerage Land	Quincy Sewerage Commission.
189. Reservoir	Metropolitan Water Board.
190. Quincy Standpipe	Quincy Water Commission.
191. Pumping Station	Quincy Water Commission.
192. Ward 2 Playground	Quincy Park Commission.
193. Blaney's Beach	Swampscott Park Commission.
194. Lyman's Hill Standpipe	Brookline Water Department.

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